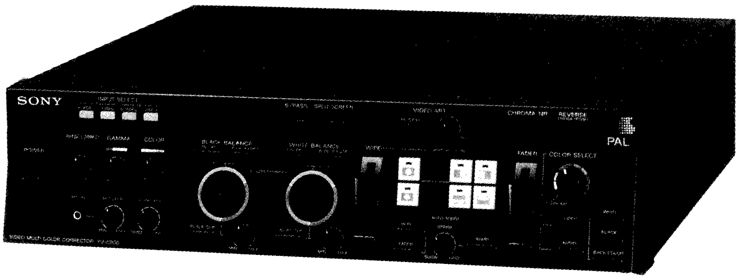
XV-C900

SERVICE MANUAL

AEP Model
UK Model
Australian Model



SPECIFICATIONS

Video color system	PAL only
S-video input/output	S-VIDEO SOURCE IN (4-pin mini DIN) S-VIDEO OUTPUT (4-pin mini DIN) Y-signal: 1 Vp-p, 75 ohms, unbalanced, sync negative C-signal: 0.3 Vp-p, 75 ohms, unbalanced
Video input/output	V SOURCE IN 1 and 2 (phono jacks) V OUTPUT (phono jacks) 1 Vp-p, 75 ohms, unbalanced, sync negative
Audio input	R/L SOURCE IN 1 and 2 (phono jacks) LINE IN (phono jacks) Input level: –7.5 dBs (0 dBs = 0.775 Vrms) Input impedance:More than 47 kilohms MIC (minijack) Input level: –66 dBs Input impedance:More than 3 kilohms
Audio output	R/L OUTPUT (phono jacks) Output level: –7.5 dBs at 47 kilohms load Output impedance:Less than 10 kilohms
Power supply	European model: AC 220V, 50Hz UK and Australian model: AC 240V, 50Hz
Power consumption	37W
Operating temperature	5°C to 40°C (41°F to 104°F)
Storage temperature	–20°C to 60°C (–4°F to 140°F)
Dimensions	430 x 115 x 425 mm (w/h/d) (17 x 4 5/8 x 16 3/4 inches)
Weight	7.5 kg (16 lb 9 oz)

Design and specifications subject to change without notice.

VIDEO MULTI COLOR CORRECTOR

SONY®

MICROFILM

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
4. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
5. Check the B+ voltage to see it is at the values specified.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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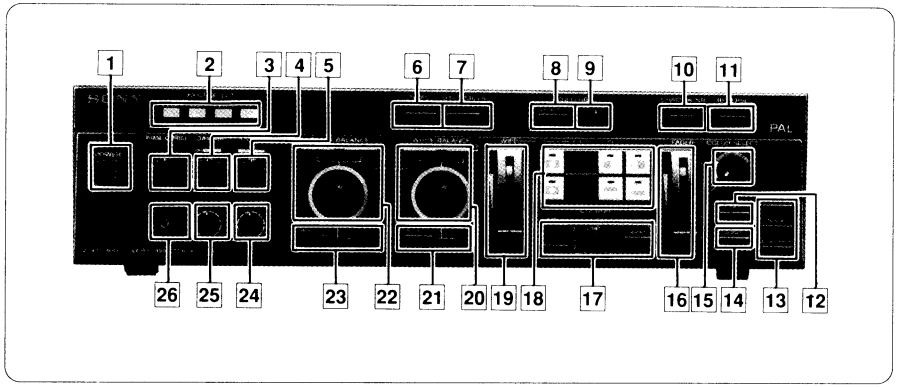
SECTION 1
GENERAL

This section is extracted from instraction manual.

1-1. LOCATION AND FUNCTION OF CONTROLS

Front panel

Each button or switch (except POWER) is equipped with an indicator which lights up when turned on. To turn the indicator off, simply press it again.



1 POWER switch

2 INPUT SELECT buttons
Select the desired input source. Two video and audio channels 1 and 2, are available. On each channel, S-VIDEO selects the VCR connected to the S-VIDEO SOURCE IN, and VIDEO selects the VCR connected to the V SOURCE IN connector.

3 PHASE CORRECT control
Adjust the strength of the image outlines.

4 GAMMA control
Adjusts the luminous intensity and color signals to give the recorded object a suitable brightness.

5 COLOR control
Adjusts the color intensity.

6 BYPASS switch
Outputs unprocessed video signals.

7 SPLIT SCREEN switch
Divides the screen to display the processed video image on the left half and the unprocessed video image on the right.

8 VIDEO ART REVERSE switch
Selects where to start painting the image, from either high (off) or low (on) luminance portions of the image.

9 VIDEO ART control
Controls the painting of the video image with color selected by the COLOR SELECT knob. To use the video art function, set the WIPE lever all the way up and operate this control.
This control should normally be set to the rightmost (maximum) position, otherwise the wipe will not function.

10 CHROMA NR (noise reduction) switch
Reduces color flickers in the image.

11 REVERSE (NEGA/POSI) switch
Inverts the output signal.

12 Fader VIDEO button
Enables video fade in/out using the FADER lever.

13 Video fader WHITE/BLACK/BACK COLOR buttons
Select either white, black or the back color designated by the COLOR SELECT knob as the fader color. (Default selection is white.)

14 Fader AUDIO button
Enables audio fade in/out using the FADER lever.

15 COLOR SELECT knob
Selects a color for wipe and video fader.

16 FADER lever
Controls the video and audio fade in/out. This lever should normally be kept at the lowermost position for both video and audio. Press the VIDEO button and move the lever up to fade out the screen in the fader color designated by the WHITE/BLACK/BACK COLOR buttons. Move it down to fade in. Press the AUDIO button and move the lever up to fade out the audio sound. Move it down to fade in.

17 AUTO WIPE/FADER buttons, SPEED control and START button
Allow automatic wipe and fade in/out. The speed can be adjusted using the SPEED control. Press the START button to begin.

18 WIPE PATTERN buttons
Select the wipe pattern.

19 WIPE lever
Wipes the screen with the color selected by the COLOR SELECT knob.

20 WHITE BALANCE ON/OFF and WIDE RANGE switches
Enable the white balance adjustment.
Press the WIDE RANGE switch to widen the range of white balance control.

21 WHITE CLIP switch and control
Compensate color with bright segments of the image to make white objects look normal. Set the compensation level using the control. Turning it clockwise increases the level.
The white clip function is disabled when the WHITE BALANCE switch is turned off.

22 BLACK BALANCE ON/OFF and WIDE RANGE switches
Enable black balance adjustment.
Press the WIDE RANGE switch to widen the range of black balance control.

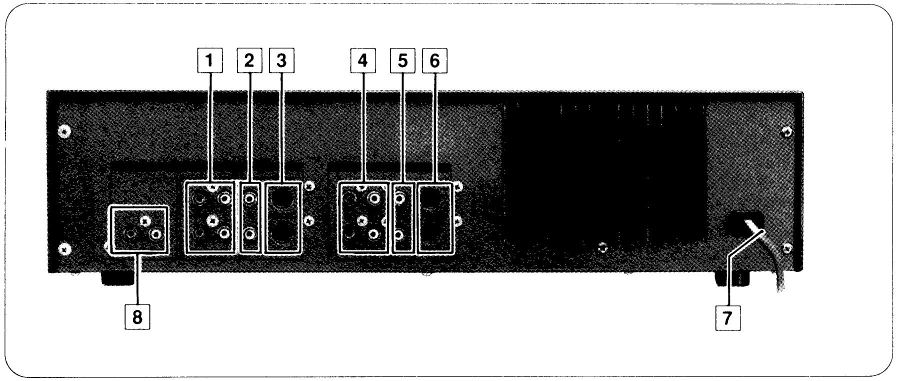
23 BLACK CLIP switch and control
Compensate color with dark segments of the image to make black objects look normal. Set the compensation level using the control. Turning it clockwise increases the level.
The black clip function is disabled when the BLACK BALANCE switch is turned off.

24 AUDIO MIX control
Controls the mixing level of audio signals input from SOURCE IN and LINE IN jacks.

25 MIC (microphone) LEVEL control
Controls the level of sound input from the MIC jack.

26 MIC jack (minijack)
Accepts a microphone.

Rear panel



[1] Audio R/L SOURCE IN 1/2 jacks (phono)
Connect to the audio output jacks of a monitor, VCR, video camera recorder or other video equipment.

[2] V(ideo) SOURCE IN 1/2 jacks (phono)
Connect to the video output jacks of a monitor, VCR, video camera recorder or other video equipment.

[3] S-VIDEO SOURCE IN 1/2 connectors (4-pin mini DIN)
Connect to the S-video output connector of a monitor, VCR, video camera recorder or other video equipment.

[4] Audio R/L OUTPUT jacks (phono)
Connect to the audio input jacks of a VCR, video camera recorder or other video equipment. The same signal is output to both upper and lower row jacks.

[5] V(ideo) OUTPUT jacks (phono)
Connect to the video input jacks of a VCR, video camera recorder or other video equipment. The same signal is output to both upper and lower jacks.

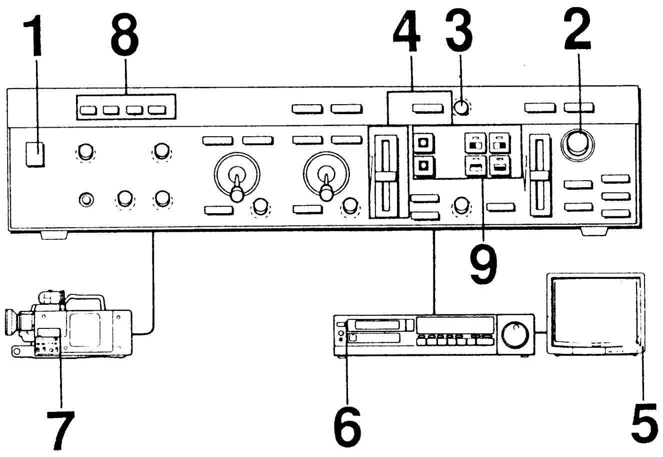
[6] S-VIDEO OUTPUT connectors (4-pin mini DIN)
Connect to the S-video input connector of a VCR, video camera recorder or other video equipment. The same signal is output to both upper and lower connectors.

[7] Power cord (mains lead)
Connect to an AC (mains) outlet.

[8] LINE IN jacks (phono)
Connect to the line output jacks of a stereo amplifier when mixing sound.

1-2. MONITOR ADJUSTMENT AND PREPARATION

Before beginning color correction using XV-C900, adjust your monitor so that colors appearing on the monitor screen will not be deceptive.



1 Turn on the color corrector.

2 Set the COLOR SELECT knob to COLOR BAR.

3 Turn the VIDEO ART control fully to MAX.

4 Press one of the WIPE PATTER buttons and move the WIPE lever to its uppermost position.

5 Turn on the TV/monitor and select the appropriate input so that the color bar appears on the screen.

6 Turn on the recording VCR. If desired, record the color bar at the beginning of a tape for monitor color adjustment during future playback.

7 Turn on the playback VCR.

8 Press the appropriate INPUT SELECT button.

9 Press the activated WIPE PATTERN button (with the lamp lit) to turn it off. The color bar disappears.

Adjusting brightness
- Turn the monitor's color control to the minimum so that the color bar appears in black and white.
- Turn the monitor's brightness control until the eight bars are clearly distinguished.

Adjusting color intensity
Adjust the monitor's color until all eight colors appear normal. (Refer to the color bar photograph [G] on the reference sheet.)

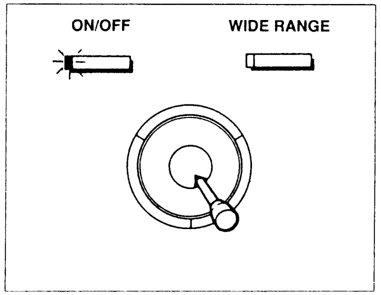
Caution
When recording the color bar or using it to adjust the color on the monitor, make sure that the power of the playback VCR is turned off. Signals being input from the SOURCE IN jacks may distort the color bar.

1-3. COLOR ADJUSTMENT AND CORRECTION DURING EDITING

Insert a prerecorded tape into the playback VCR, begin playback and adjust color using the functions listed below. Refer to the photographs provided on the attached color reference sheet.

White/Black Balance

To make "supposed-to-be white" objects look properly white [A]
Press the WHITE BALANCE ON/OFF switch and move the lever.



This allows color correction of the video image's bright portions.

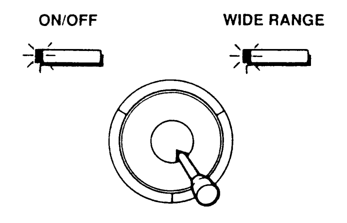
To make "supposed-to-be black" objects look properly black [B]
Press the BLACK BALANCE ON/OFF switch and move the lever.
This allows color correction of the video image's dark portions.

You can even create special color effects with this function. [C]
A color screen can be changed gradually to monochrome or a monochrome screen gradually to color. Setting the COLOR control to the leftmost position (minimum) may provide better results.

Note
The desired color may not be generated if a video source without burst signals is input (from a monochrome video camera, etc.)

Wide Range

For a greater range of corrections
Press the WIDE RANGE switch(es) and move the WHITE (BLACK) BALANCE lever(s).



The color compensation volume expands approximately three-fold when the WIDE RANGE switch is pressed.

Note
Certain TV sets have a muting function which may cause the screen to go blank when noise-ridden pictures, such as high-speed picture search images, are processed by this unit.

White/Black Clip

Compensating color with bright (dark) segments of the image
When the video image is adjusted referring to a color other than white or black, white and black objects may not appear natural. Even in that case, the WHITE (BLACK) CLIP function allows you to compensate color with the white (black) segments of an excessively bright (dark) screen.

Press the WHITE (BLACK) CLIP switch. Adjust the white (black) balance compensation level using the control.
Turn the control fully to the right to maximize the compensation level. When it is set to the leftmost position (minimum), the level is the same as when the WHITE (BLACK) CLIP switch is turned off. Both the switch and control do not function when the WHITE (BLACK) BALANCE ON/OFF switch is turned off.

Note
In normal circumstances, use the unit with this switch turned off.

Color Control

Adjusting color intensity [D]
- Turn the control clockwise to obtain a deeper color.
- Turn the control counterclockwise to obtain a lighter color.
- In normal circumstances, set this control to the center click position.

Gamma Control

Correcting pictures that are either too bright or dark [E]
- To brighten a dark subject on a bright background, turn the GAMMA control towards HIGH.
- To make a bright subject on a dark background easier to see, turn the control towards LOW.
- In normal circumstances, set the control at the center click position.

Phase Correct

Correcting false outlines after repeated editing
- Turn the control towards [+] makes the overall contrast sharper.
- Turn the control towards [–] allows you to eliminate false outlines around the edges of the picture.
- In normal circumstances, set the control at the center click position.

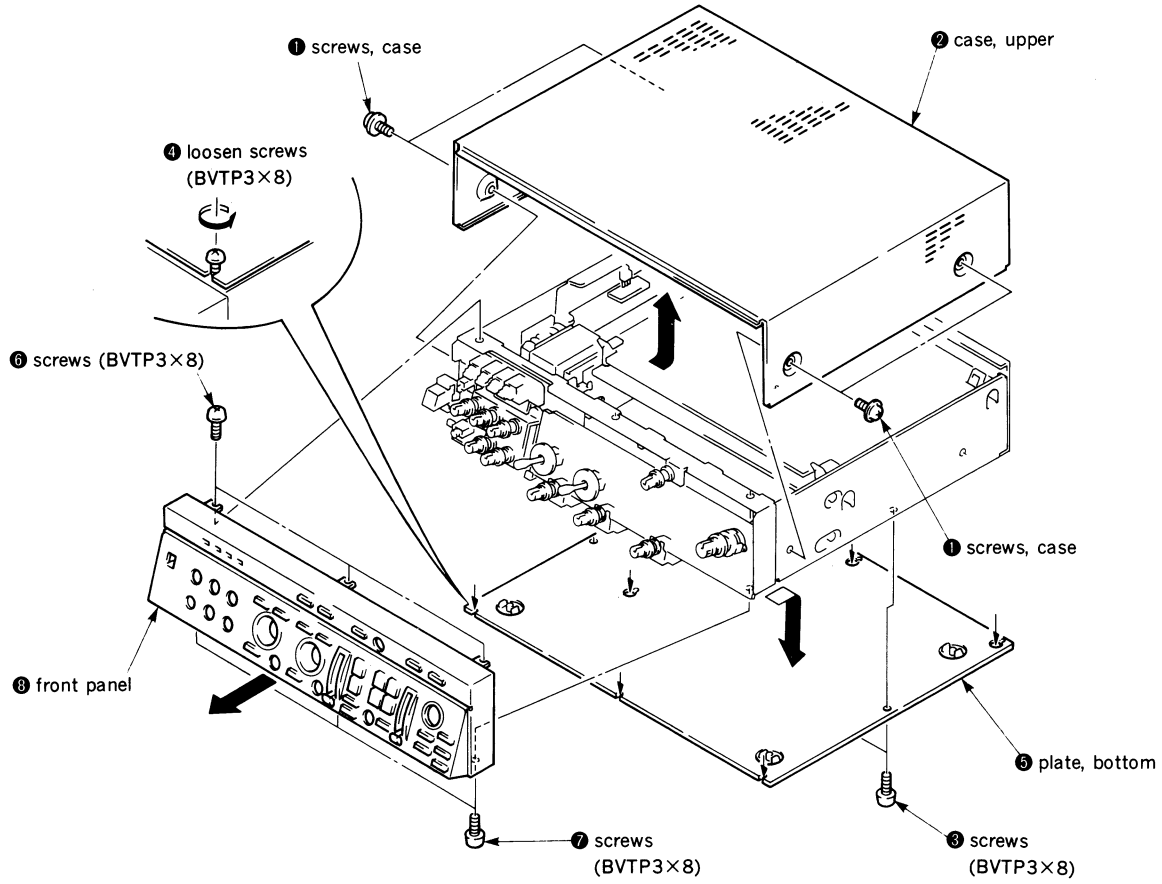
Chroma NR (noise reduction)

Reducing color flickers [F]
- Turn the CHROMA NR switch on to reduce color flickering caused by repeated editing.
- This function does not affect normal images.

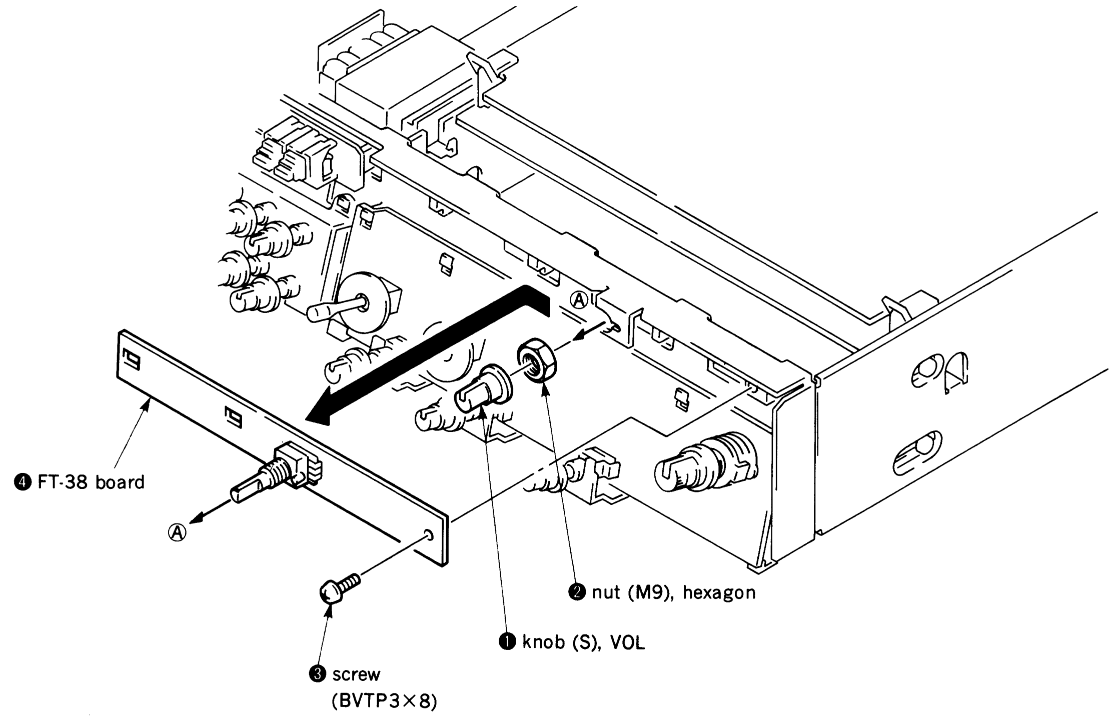
SECTION 2
DISASSEMBLY

Note : The number within "●" means the seguential number for dismounting.

2-1. REMOVAL OF CABINET, FRONT PANEL

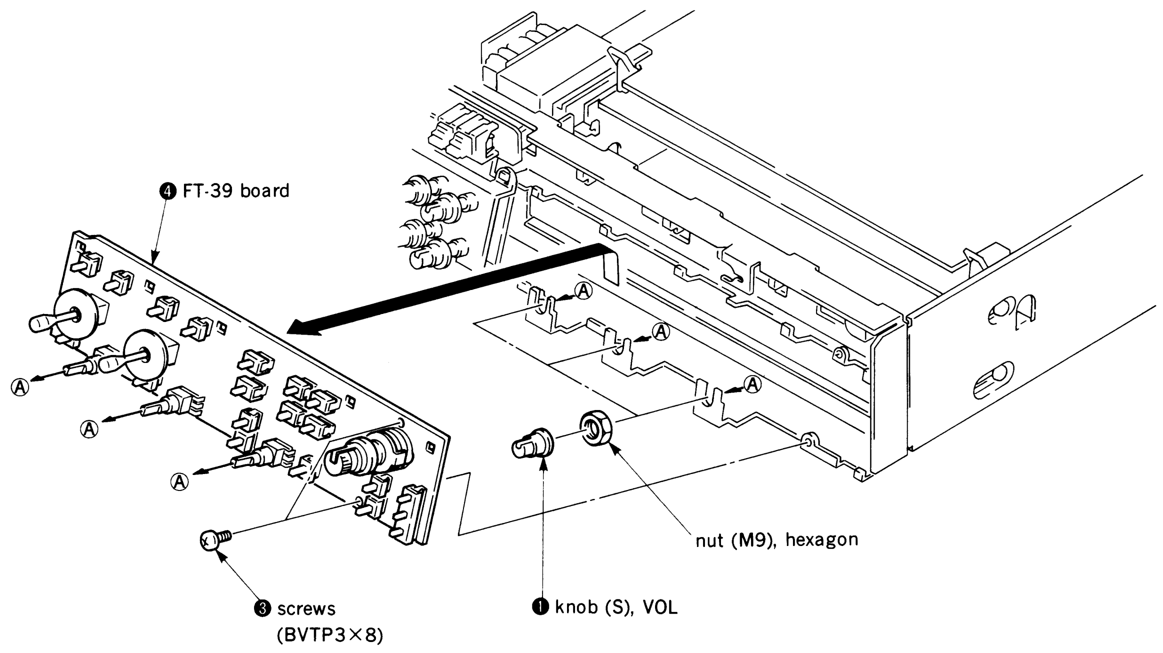

❶ screws, case
❷ case, upper
❹ loosen screws
(BVTP3×8)
❻ screws (BVTP3×8)
❶ screws, case
❽ front panel
❺ plate, bottom
❼ screws
(BVTP3×8)
❸ screws
(BVTP3×8)

2-2. REMOVAL OF FT-38 BOARD

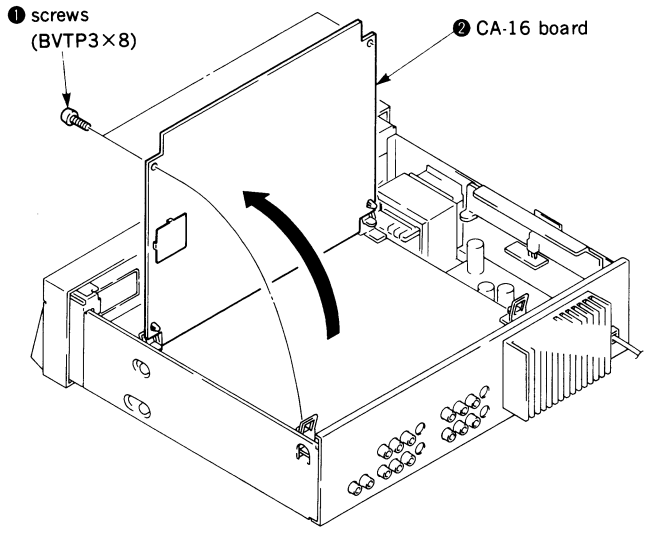

Ⓐ
Ⓐ
❹ FT-38 board
❷ nut (M9), hexagon
❶ knob (S), VOL
❸ screw
(BVTP3×8)

2-3. REMOVAL OF FT-39 BOARD

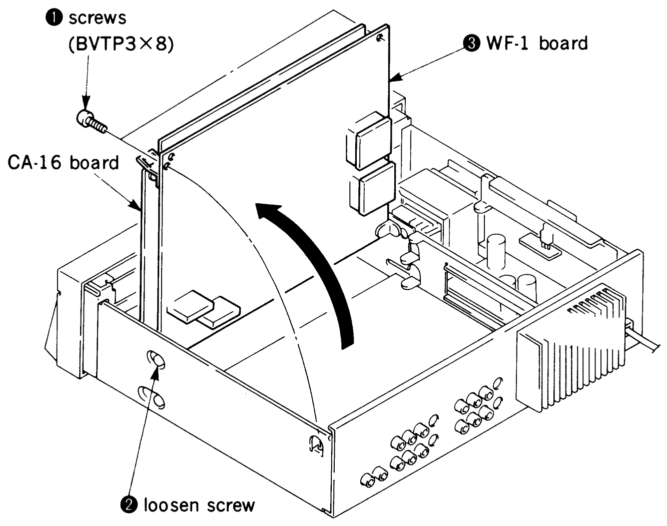
1) Refer to 2-2. and remove the FT-38 board.


❹ FT-39 board
Ⓐ
Ⓐ
Ⓐ
Ⓐ
Ⓐ
Ⓐ
❸ screws
(BVTP3×8)
❶ knob (S), VOL
nut (M9), hexagon

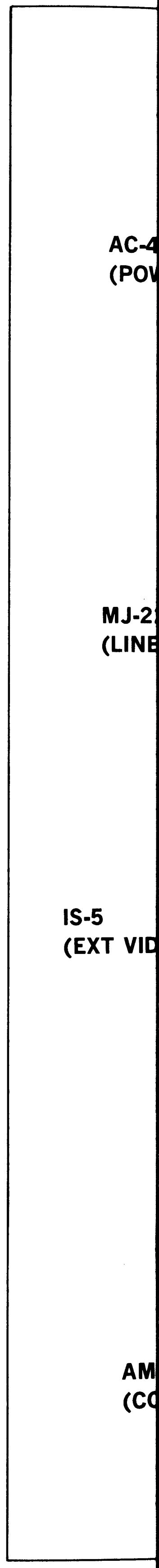
2-4. OPENING OF CA-16 BOARD


❶ screws
(BVTP3×8)
❷ CA-16 board

2-5. OPENING OF WF-1 BOARD

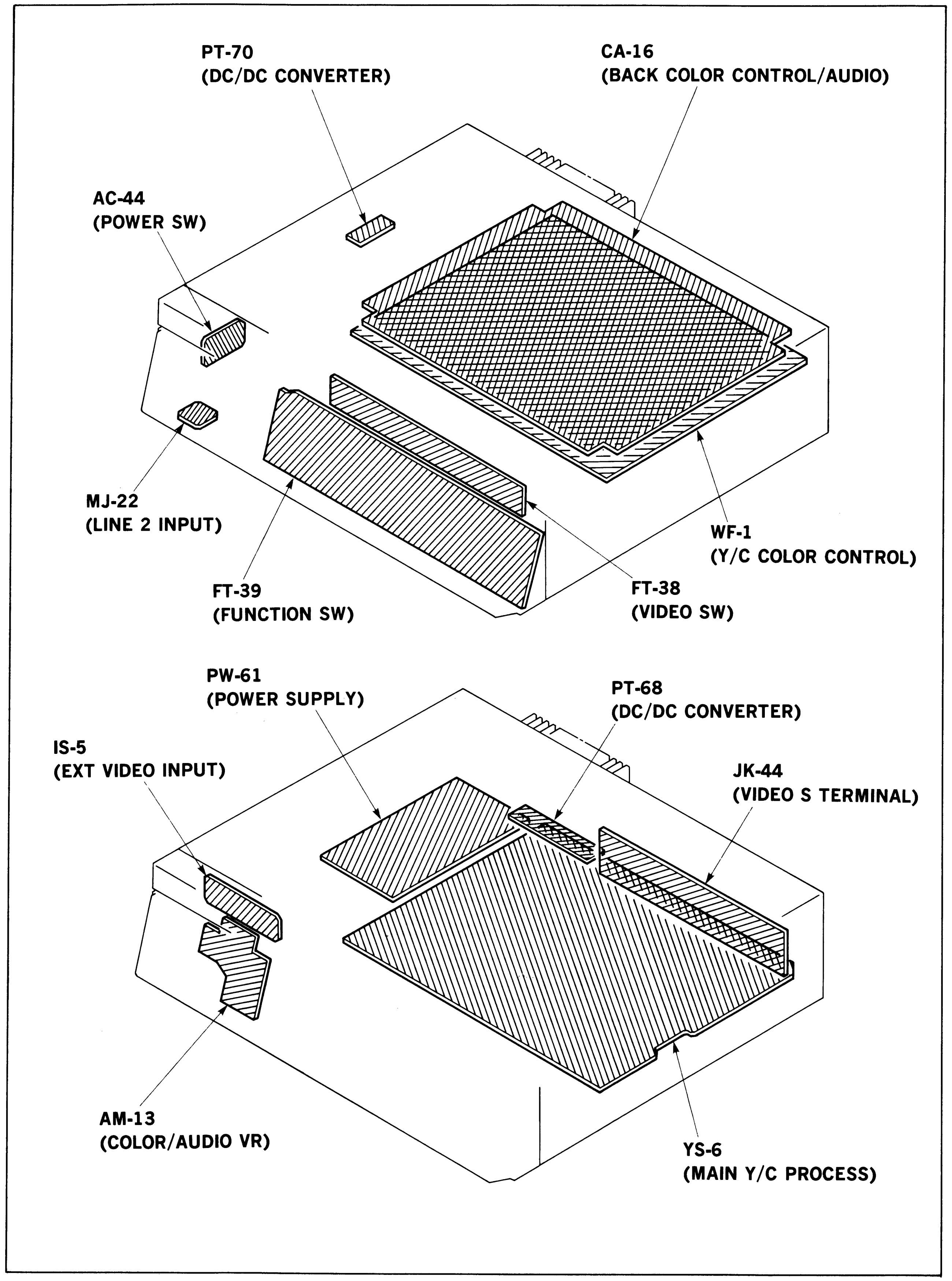

❶ screws
(BVTP3×8)
❸ WF-1 board
CA-16 board
❷ loosen screw

3-1. CIRCUI

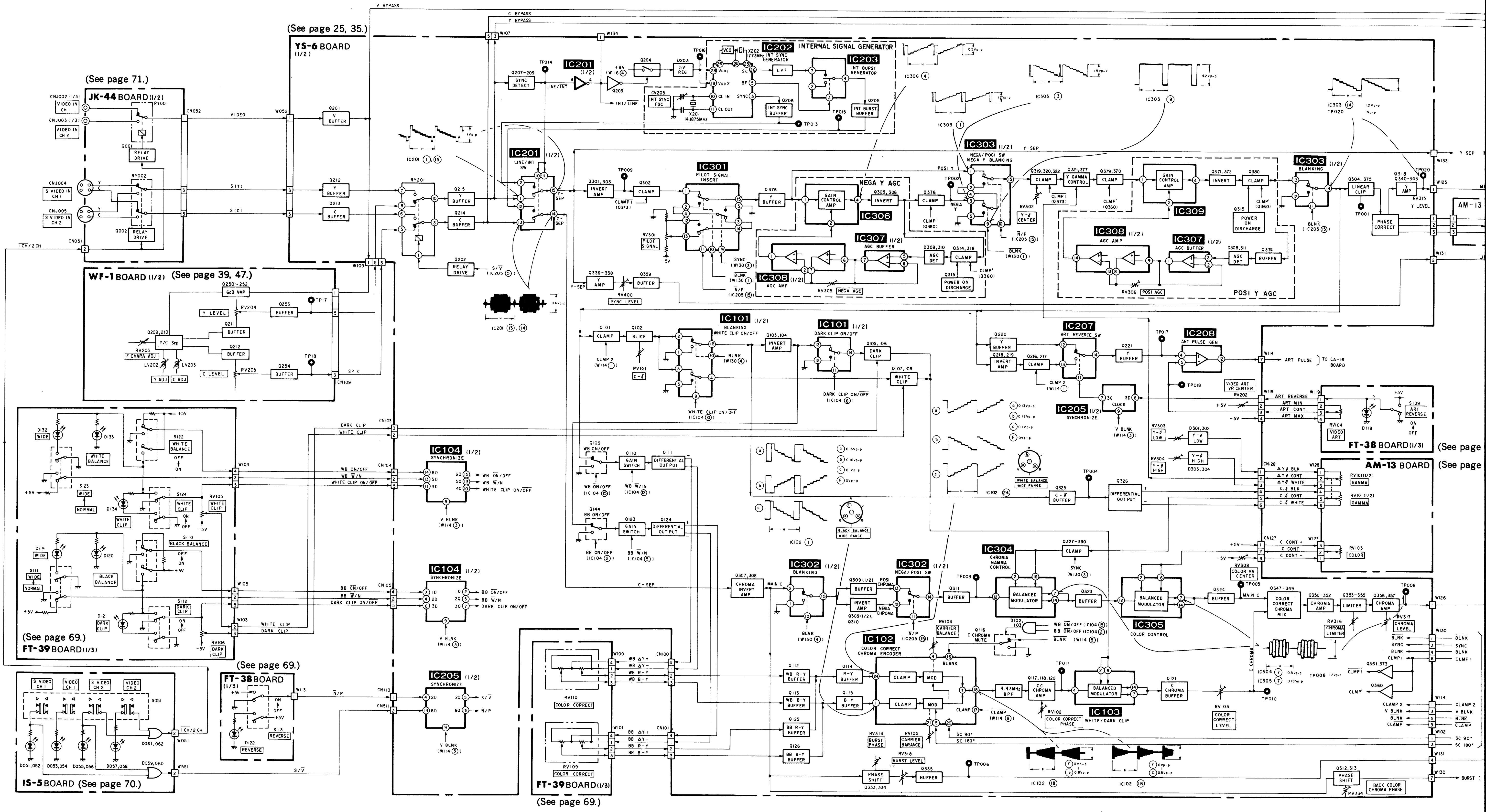

AC-4
(PO
MJ-2
(LINE
IS-5
(EXT VID
AM
(C

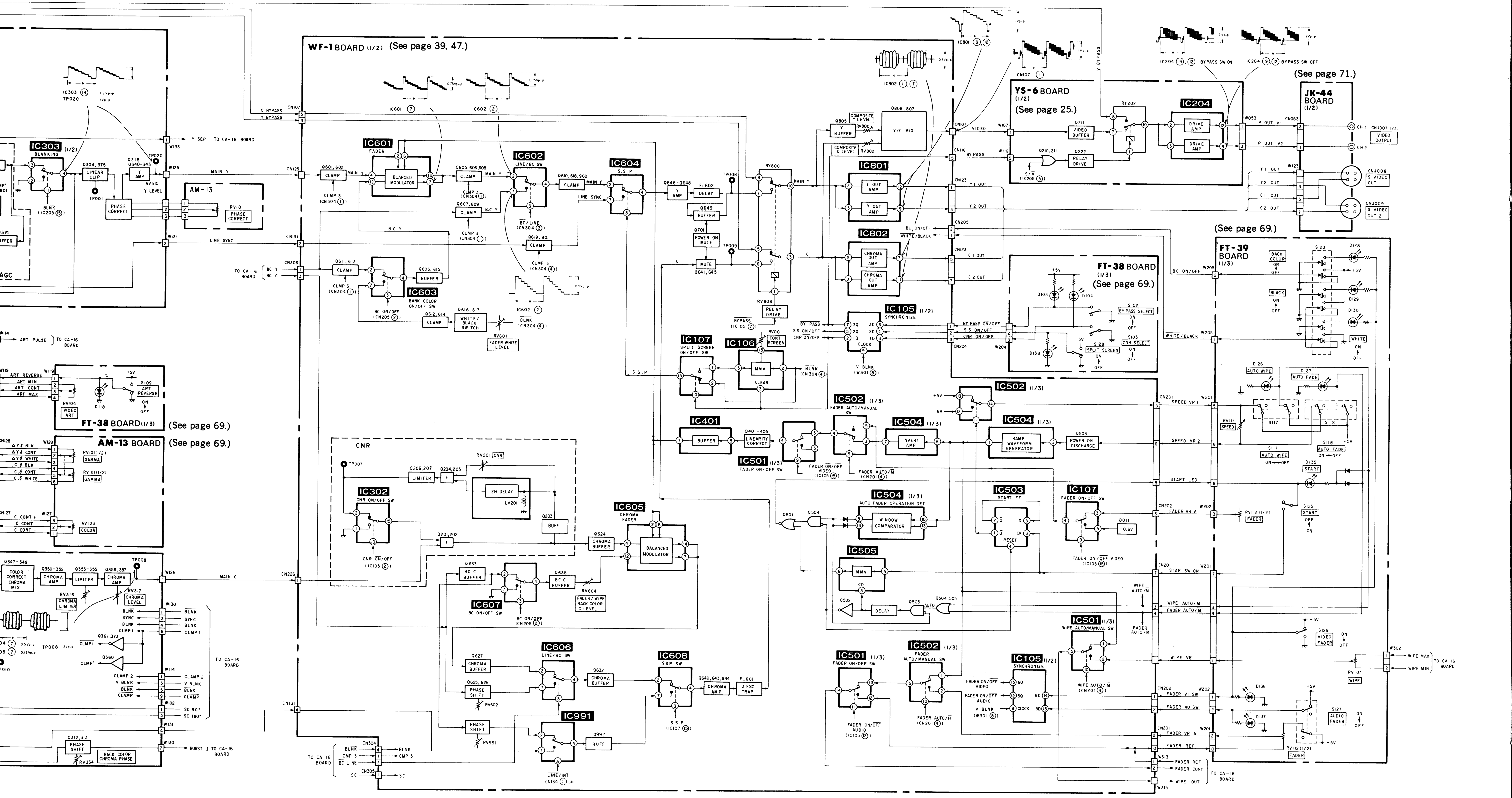
SECTION 3
DIAGRAMS

3-1. CIRCUIT BOARDS LOCATION

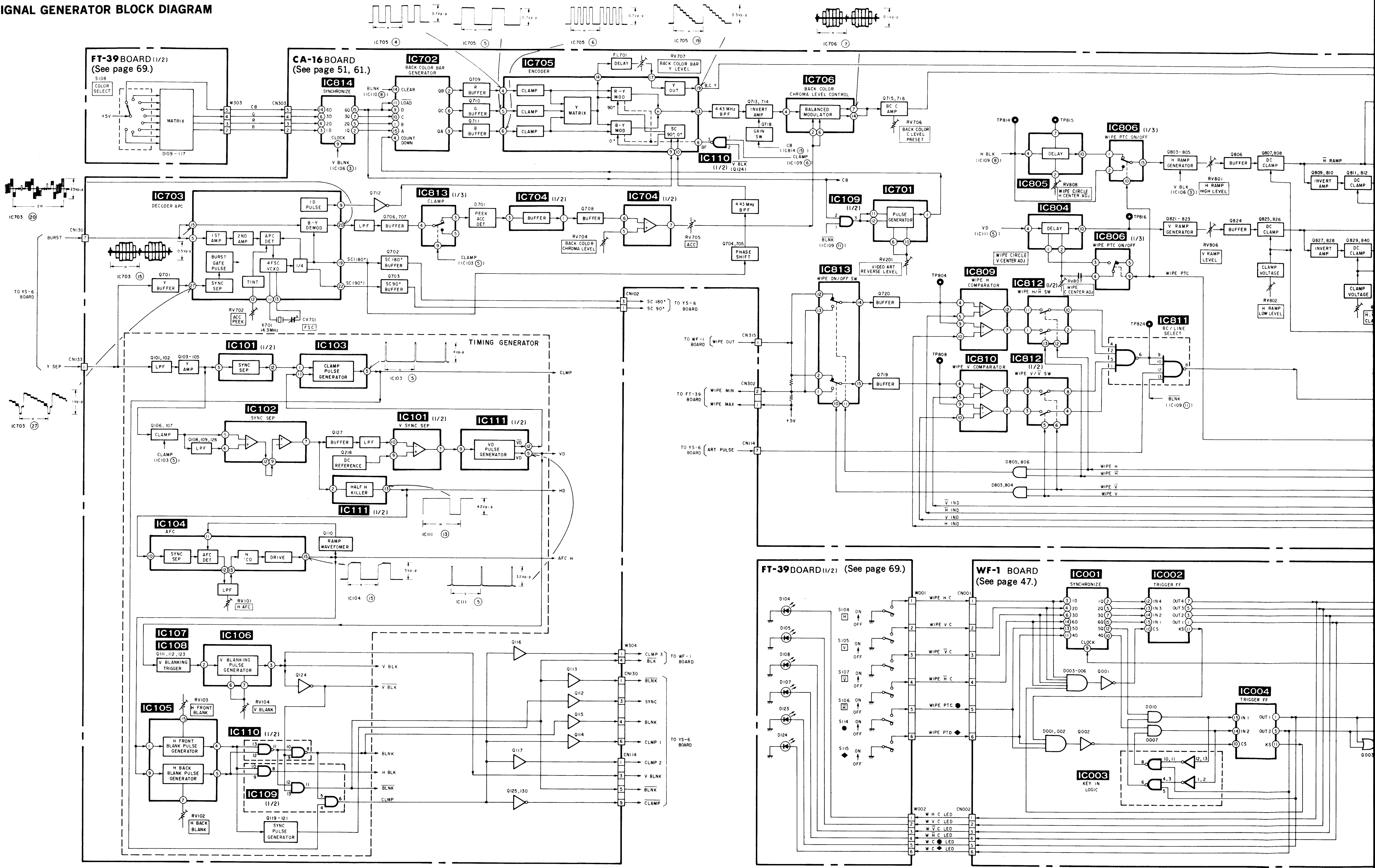

PT-70
(DC/DC CONVERTER)
CA-16
(BACK COLOR CONTROL/AUDIO)
AC-44
(POWER SW)
MJ-22
(LINE 2 INPUT)
WF-1
(Y/C COLOR CONTROL)
FT-39
(FUNCTION SW)
FT-38
(VIDEO SW)
PW-61
(POWER SUPPLY)
PT-68
(DC/DC CONVERTER)
IS-5
(EXT VIDEO INPUT)
JK-44
(VIDEO S TERMINAL)
AM-13
(COLOR/AUDIO VR)
YS-6
(MAIN Y/C PROCESS)

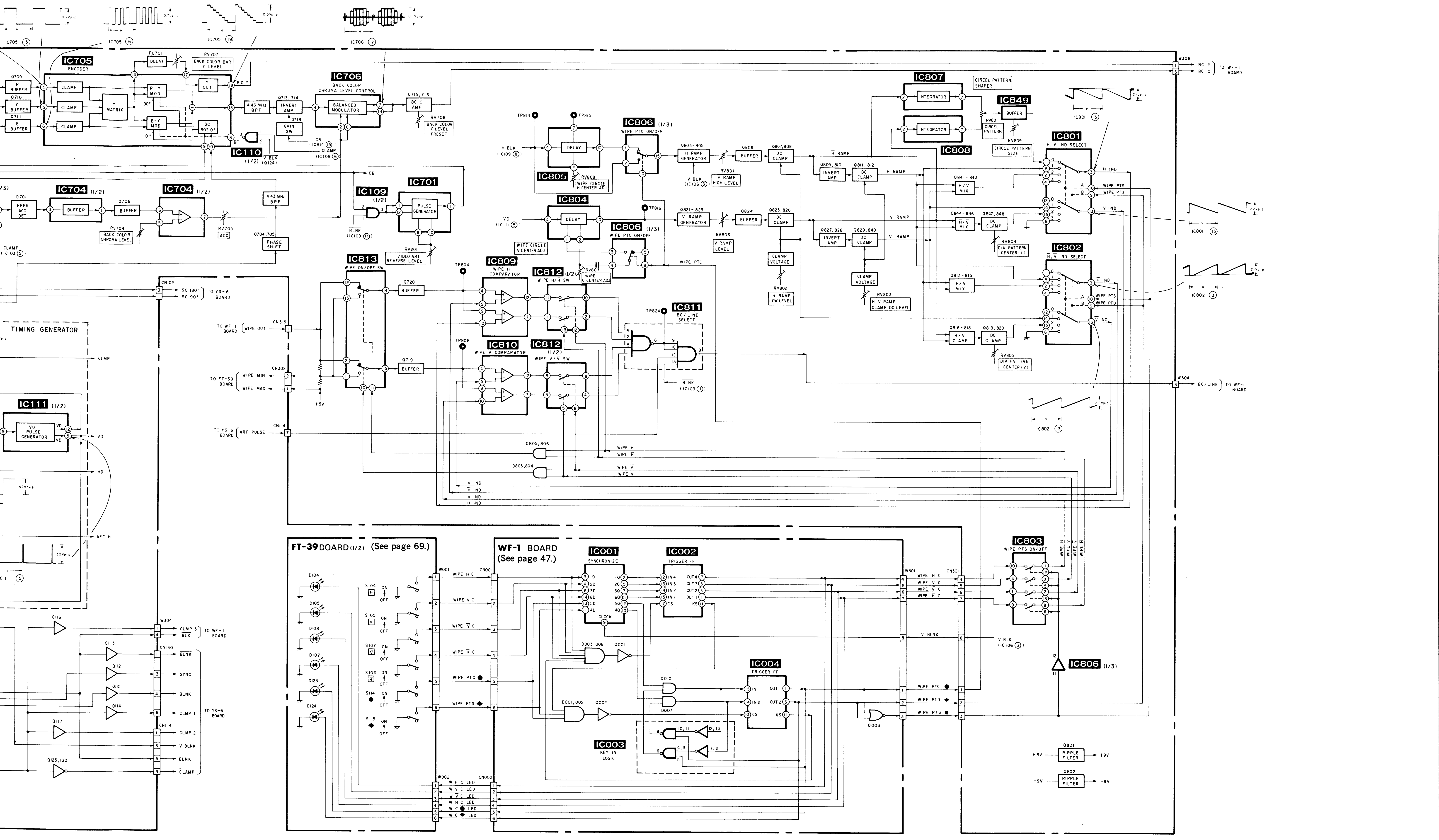
3-2. COLOR CORRECT BLOCK DIAGRAM


(See page 25, 35.)
YS-6 BOARD (1/2)
(See page 71.)
JK-44 BOARD (1/2)
VIDEO IN CH 1
VIDEO IN CH 2
S VIDEO IN CH 1
S VIDEO IN CH 2
RELAY DRIVE
I CH/2 CH
VIDEO
S(Y)
S(C)
V BUFFER
Y BUFFER
C BUFFER
RELAY DRIVE
S/V (IC205 ⑤)
V BYPASS
C BYPASS
Y BYPASS
SYNC DETECT
IC201 (1/2)
LINE/INT
INT/LINE
5V REG
IC202 INTERNAL SIGNAL GENERATOR
VCO
14.1875MHz
INT SYNC GENERATOR
LPF
IC203 INT BURST GENERATOR
INT SYNC FSC
INT SYNC BUFFER
INT BURST BUFFER
TP013
TP014
TP015
TP016
IC201 (1/2) LINE/INT SW
Y-SEP
C-SEP
IC201 ①, ⑮
IC201 ⑬, ⑭
WF-1 BOARD (1/2) (See page 39, 47.)
6dB AMP
Y LEVEL
Y/C Sep
F CHARA ADJ
Y ADJ
C ADJ
C LEVEL
BUFFER
TP17
TP18
SP C
INVERT AMP
CLAMP
TP009
CLAMP 1 (Q373)
IC301 PILOT SIGNAL INSERT
PILOT SIGNAL
SYNC LEVEL
Y AMP
Y BUFFER
NEGA Y AGC
IC306
GAIN CONTROL AMP
INVERT
IC307 (1/2) AGC BUFFER
IC308 (1/2) AGC AMP
AGC DET
POWER ON DISCHARGE
NEGA AGC
IC303 (1/2) NEGA/POSI SW NEGA Y BLANKING
Y GAMMA CONTROL
Y-γ CENTER
IC309
IC303 (1/2) BLANKING
LINEAR CLIP
Y AMP
Y LEVEL
PHASE CORRECT
POSI AGC
POSI Y AGC
Y SEP
AM-13
IC306 ④
IC303 ③
IC303 ⑨
IC303 ①
IC303 ⑭
TP020
FT-39 BOARD (1/3)
WHITE BALANCE
WHITE CLIP
BLACK BALANCE
DARK CLIP
WIDE
NORMAL
(See page 69.)
IC104 (1/2) SYNCHRONIZE
WB ON/OFF
WB W/N
WHITE CLIP ON/OFF
BB ON/OFF
BB W/N
DARK CLIP ON/OFF
V BLNK (W114 ③)
IC205 (1/2) SYNCHRONIZE
N/P
IS-5 BOARD (See page 70.)
FT-38 BOARD (1/3)
REVERSE
FT-39 BOARD (1/3)
COLOR CORRECT
WB ΔY+
WB ΔY-
WB R-Y
WB B-Y
BB ΔY+
BB ΔY-
BB R-Y
BB B-Y
IC101 (1/2) BLANKING WHITE CLIP ON/OFF
SLICE
C-γ
IC101 (1/2) DARK CLIP ON/OFF
WHITE CLIP
GAIN SWITCH
DIFFERENTIAL OUT PUT
C-SEP
CHROMA INVERT AMP
MAIN C
IC302 (1/2) BLANKING
IC302 (1/2) NEGA/POSI SW
IC102 COLOR CORRECT CHROMA ENCODER
R-Y BUFFER
B-Y BUFFER
MOD
4.43MHz BPF
CC CHROMA AMP
COLOR CORRECT PHASE
BURST PHASE
CARRIER BARANCE
BURST LEVEL
PHASE SHIFT
IC103 WHITE/DARK CLIP
C CHROMA BUFFER
COLOR CORRECT LEVEL
IC304 CHROMA GAMMA CONTROL
BALANCED MODULATOR
IC305 COLOR CONTROL
COLOR CORRECT CHROMA MIX
CHROMA AMP
LIMITER
CHROMA LIMITER
CHROMA LEVEL
IC207 ART REVERCE SW
INVERT AMP
IC205 (1/2) SYNCHRONIZE
IC208 ART PULSE GEN
ART PULSE TO CA-16 BOARD
VIDEO ART VR CENTER
ART REVERSE
ART MIN
ART CONT
ART MAX
FT-38 BOARD (1/3) (See page
Y-γ LOW
Y-γ HIGH
C-γ BUFFER
DIFFERENTIAL OUT PUT
AM-13 BOARD (See page
ΔY γ BLK
ΔY γ CONT
ΔY γ WHITE
C γ BLK
C γ CONT
C γ WHITE
GAMMA
C CONT +
C CONT -
COLOR
COLOR VR CENTER
WHITE BALANCE WIDE RANGE
BLACK BALANCE WIDE RANGE
IC102 ㉔
IC102 ①
IC102 ⑱
TP004
TP005
TP006
TP008
TP010
TP011
BLNK
SYNC
CLMP 1
CLAMP 2
V BLNK
SC 90°
SC 180°
BURST
BACK COLOR CHROMA PHASE

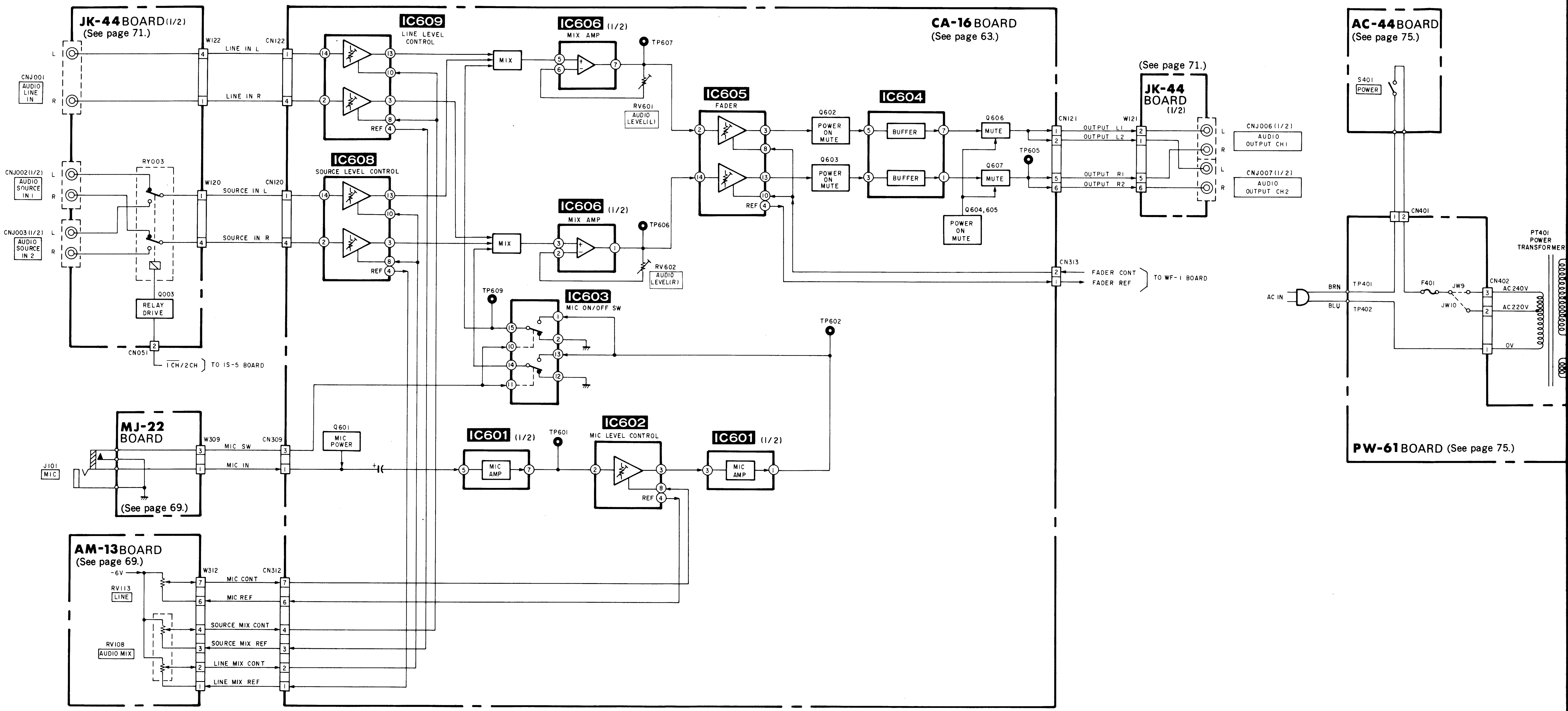

WF-1 BOARD (1/2) (See page 39, 47.)
IC303 BLANKING (1/2)
AM-13
PHASE CORRECT
AGC
FT-38 BOARD (1/3) (See page 69.)
AM-13 BOARD (See page 69.)
ART REVERSE
ART MIN
ART CONT
ART MAX
VIDEO ART
GAMMA
COLOR
COLOR CORRECT CHROMA MIX
CHROMA AMP
LIMITER
CHROMA LIMITER
CHROMA LEVEL
BACK COLOR CHROMA PHASE
PHASE SHIFT
Y SEP TO CA-16 BOARD
MAIN Y
LINE SYNC
MAIN C
BURST TO CA-16 BOARD
C BYPASS
Y BYPASS
IC601 FADER
BLANCED MODULATOR
IC602 LINE/BC SW
IC603 BANK COLOR ON/OFF SW
IC604 S.S.P
CLAMP
BUFFER
WHITE/BLACK SWITCH
FADER WHITE LEVEL
CNR
IC302 CNR ON/OFF SW
LIMITER
2H DELAY
BUFF
IC605 CHROMA FADER
BALANCED MODULATOR
CHROMA BUFFER
BC C BUFFER
FADER/WIPE BACK COLOR C LEVEL
IC607 BC ON/OFF SW
IC606 LINE/BC SW
CHROMA BUFFER
PHASE SHIFT
IC991
IC608 SSP SW
CHROMA AMP
3 FSC TRAP
TO CA-16 BOARD
BLNK
CMP 3
BC LINE
SC
Y AMP
DELAY
POWER ON MUTE
MUTE
RELAY DRIVE
IC107 SPLIT SCREEN ON/OFF SW
IC106 MMV
CLEAR
CONT SCREEN
Y BUFFER
COMPOSITE Y LEVEL
COMPOSITE C LEVEL
Y/C MIX
IC801 Y OUT AMP
IC802 CHROMA OUT AMP
IC105 (1/2) SYNCHRONIZE
CLOCK
IC401 BUFFER
LINEARITY CORRECT
IC501 (1/3) FADER ON/OFF SW
IC502 (1/3) FADER AUTO/MANUAL SW
IC504 (1/3) INVERT AMP
IC504 (1/3) RAMP WAVEFORM GENERATOR
POWER ON DISCHARGE
IC504 (1/3) AUTO FADER OPERATION DET
WINDOW COMPARATOR
IC503 START FF
IC107 FADER ON/OFF SW
IC505 MMV
DELAY
IC501 (1/3) WIPE AUTO/MANUAL SW
IC105 (1/2) SYNCHRONIZE
YS-6 BOARD (1/2) (See page 25.)
VIDEO BUFFER
RELAY DRIVE
IC204 DRIVE AMP
JK-44 BOARD (1/2) (See page 71.)
VIDEO OUTPUT
S VIDEO OUT 1
S VIDEO OUT 2
FT-38 BOARD (1/3) (See page 69.)
BY PASS SELECT
SPLIT SCREEN
CNR SELECT
FT-39 BOARD (1/3) (See page 69.)
BACK COLOR
BLACK
WHITE
AUTO WIPE
AUTO FADE
SPEED
START
FADER
VIDEO FADER
WIPE
AUDIO FADER
WIPE MAX
WIPE MIN
TO CA-16 BOARD

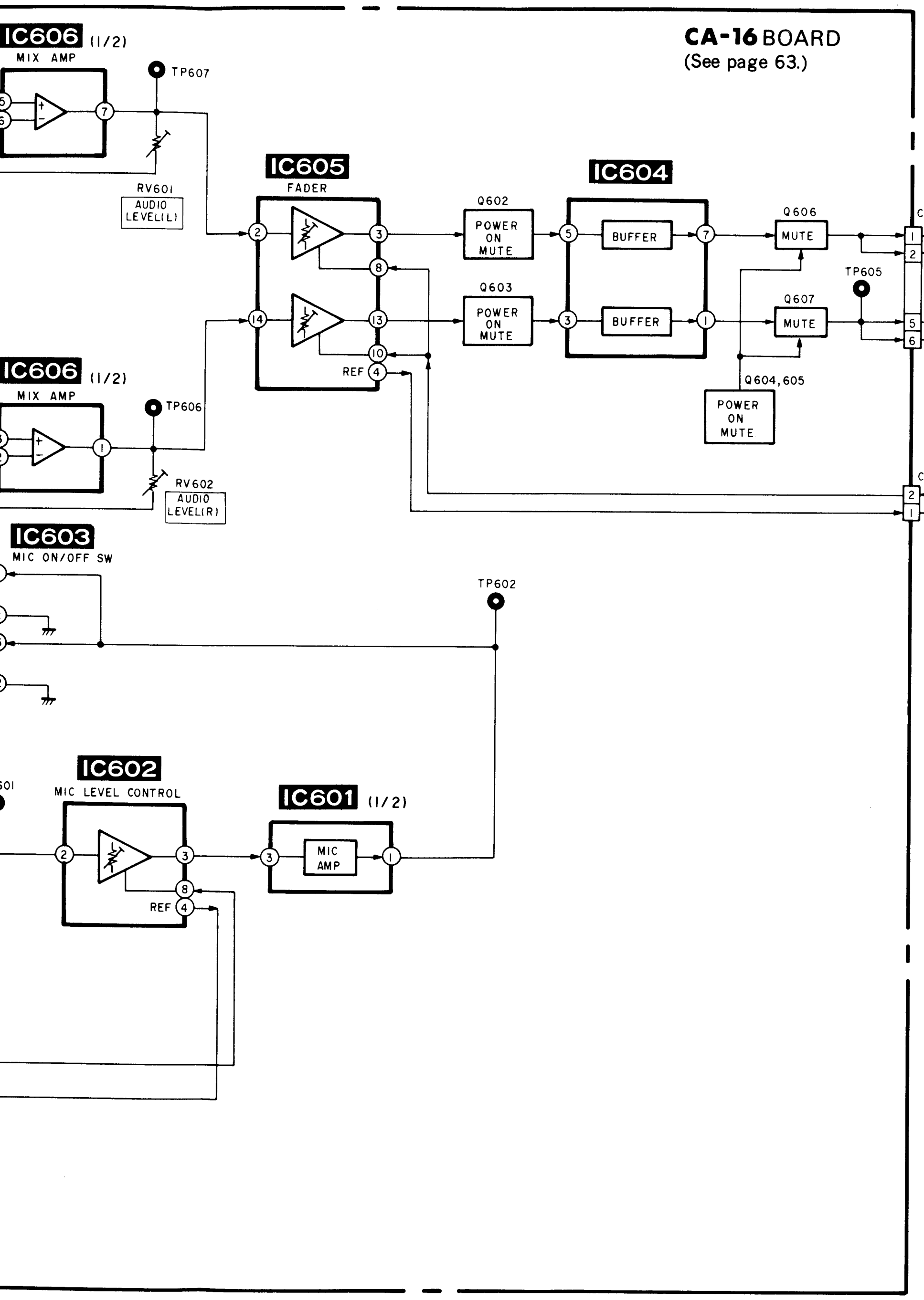
3-3. BACK COLOR SIGNAL GENERATOR BLOCK DIAGRAM

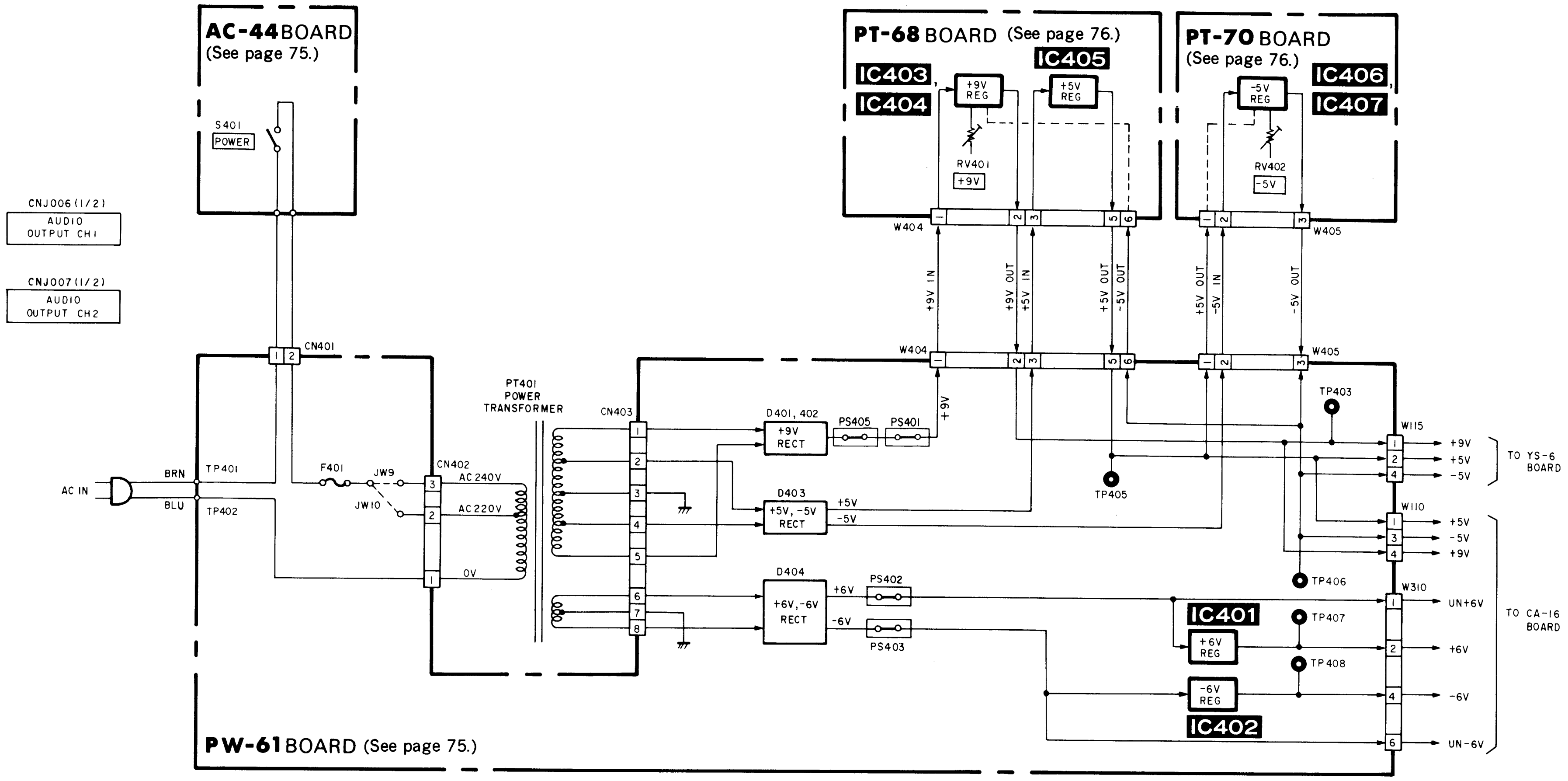

FT-39 BOARD (1/2) (See page 69.)
S108 COLOR SELECT
MATRIX
D109 - 117
CA-16 BOARD (See page 51, 61.)
IC814 SYNCHRONIZE
IC702 BACK COLOR BAR GENERATOR
COUNT DOWN
IC705 ENCODER
CLAMP
Y MATRIX
R-Y MOD
B-Y MOD
Y OUT
SC 90°,0°
FL701 DELAY
RV707 BACK COLOR BAR Y LEVEL
4.43 MHz BPF
Q713, 714 INVERT AMP
Q718 GAIN SW
IC706 BACK COLOR CHROMA LEVEL CONTROL
BALANCED MODULATOR
Q715, 716 BC C AMP
RV706 BACK COLOR C LEVEL PRESET
IC110 (1/2)
IC703 DECODER APC
ID PULSE
B-Y DEMOD
1ST AMP
2ND AMP
APC DET
BURST GATE PULSE
4FSC VCXO
1/4
SYNC SEP
TINT
RV702 ACC PEEK
X701 14.3MHz
CV701 FSC
Q701 Y BUFFER
Q712
IC813 (1/3) CLAMP
D701 PEEK ACC DET
IC704 (1/2) BUFFER
Q708 BUFFER
RV704 BACK COLOR CHROMA LEVEL
RV705 ACC
Q704, 705 PHASE SHIFT
Q702 SC180° BUFFER
Q703 SC90° BUFFER
IC109 (1/2)
IC701 PULSE GENERATOR
RV201 VIDEO ART REVERSE LEVEL
TIMING GENERATOR
IC101 (1/2) SYNC SEP
IC103 CLAMP PULSE GENERATOR
Q101, 102 LPF
Q103-105 Y AMP
IC102 SYNC SEP
Q106, 107 CLAMP
Q108, 109, 126 LPF
Q127 BUFFER
Q218 DC REFERENCE
IC101 (1/2) V SYNC SEP
IC111 (1/2) VD PULSE GENERATOR
IC111 (1/2) HALF H KILLER
IC104 AFC
SYNC SEP
AFC DET
H 'CO
DRIVE
Q110 RAMP WAVEFORMER
RV101 H AFC
IC107 IC108 Q111, 112, 123 V BLANKING TRIGGER
IC106 V BLANKING PULSE GENERATOR
RV104 V BLANK
RV103 H FRONT BLANK
IC105 H FRONT BLANK PULSE GENERATOR
H BACK BLANK PULSE GENERATOR
RV102 H BACK BLANK
IC110 (1/2)
IC109 (1/2)
Q119 - 121 SYNC PULSE GENERATOR
Q116 Q113 Q112 Q115 Q114 Q117 Q125, 130
CLMP VD HD AFC H
V BLK
BLNK
H BLK
TO YS-6 BOARD
TO WF-1 BOARD
TO FT-39 BOARD
CN102 SC 180° SC 90°
CN315 WIPE OUT
CN302 WIPE MIN WIPE MAX
CN114 ART PULSE
IC805 DELAY
RV808 WIPE CIRCLE H CENTER ADJ
IC806 (1/3) WIPE PTC ON/OFF
Q803 - 805 H RAMP GENERATOR
RV801 H RAMP HIGH LEVEL
Q806 BUFFER
Q807, 808 DC CLAMP
Q809, 810 INVERT AMP
Q811, 812 DC CLAMP
IC804 DELAY
WIPE CIRCLE V CENTER ADJ
RV807 WIPE C CENTER ADJ
Q821 - 823 V RAMP GENERATOR
RV806 V RAMP LEVEL
Q824 BUFFER
Q825, 826 DC CLAMP
Q827, 828 INVERT AMP
Q829, 840 DC CLAMP
CLAMP VOLTAGE
RV802 H RAMP LOW LEVEL
IC813 WIPE ON/OFF SW
Q720 BUFFER
Q719 BUFFER
IC809 WIPE H COMPARATOR
IC812 (1/2) WIPE H/H SW
IC811 BC/LINE SELECT
IC810 WIPE V COMPARATOR
IC812 (1/2) WIPE V/V SW
D805, 806
D803, 804
WIPE PTC
FT-39 BOARD (1/2) (See page 69.)
S104 S105 S107 S106 S114 S115 ON OFF
D104 D105 D108 D107 D123 D124
WF-1 BOARD (See page 47.)
IC001 SYNCHRONIZE
IC002 TRIGGER FF
D003 - 006 Q001
D001, 002 Q002
IC003 KEY IN LOGIC
IC004 TRIGGER FF
WIPE H C
WIPE V C
WIPE PTC ●
WIPE PTD ◆
W H C LED
W V C LED
W C ● LED
W C ◆ LED


IC705 ⑤
IC705 ⑥
IC705 ⑲
IC706 ⑦
IC705
ENCODER
R BUFFER
G BUFFER
B BUFFER
Q709
Q710
Q711
CLAMP
Y MATRIX
R-Y MOD
B-Y MOD
FL701
DELAY
RV707
BACK COLOR BAR Y LEVEL
Y OUT
SC 90°, 0°
B.C Y
IC110
(1/2)
V BLK (Q124)
4.43 MHz BPF
Q713, 714
INVERT AMP
Q718
GAIN SW
IC706
BACK COLOR CHROMA LEVEL CONTROL
BALANCED MODULATOR
Q715, 716
BC C AMP
RV706
BACK COLOR C LEVEL PRESET
CB (IC814 ⑮)
CLAMP (IC109 ⑥)
CB
IC704 (1/2)
D701
PEEK ACC DET
BUFFER
Q708
RV704
BACK COLOR CHROMA LEVEL
RV705
ACC
Q704, 705
PHASE SHIFT
CLAMP (IC103 ⑤)
IC109 (1/2)
BLNK (IC109 ⑪)
IC701
PULSE GENERATOR
RV201
VIDEO ART REVERSE LEVEL
TP814
TP815
IC806 (1/3)
WIPE PTC ON/OFF
H BLK (IC109 ⑧)
IC805
RV808
WIPE CIRCLE H CENTER ADJ
Q803-805
H RAMP GENERATOR
V BLK (IC106 ③)
RV801
H RAMP HIGH LEVEL
Q806
BUFFER
Q807, 808
DC CLAMP
IC804
DELAY
TP816
VD (IC111 ⑤)
WIPE CIRCLE V CENTER ADJ
RV807
WIPE C CENTER ADJ
Q821-823
V RAMP GENERATOR
RV806
V RAMP LEVEL
Q824
Q825, 826
CLAMP VOLTAGE
RV802
H RAMP LOW LEVEL
WIPE PTC
IC807
INTEGRATOR
CIRCEL PATTERN SHAPER
IC849
RV801
CIRCLE PATTERN
IC808
RV809
CIRCLE PATTERN SIZE
H RAMP
Q809, 810
INVERT AMP
Q811, 812
Q841-843
H/V MIX
V RAMP
Q844-846
Q847, 848
Q827, 828
Q829, 840
RV804
DIA PATTERN CENTER (1)
RV803
H.V RAMP CLAMP DC LEVEL
IC801
H, V IND SELECT
H IND
WIPE PTS
WIPE PTD
V IND
IC801 ③
IC801 ⑬
IC802
H, V IND SELECT
Q813-815
H/V MIX
Q816-818
H/V CLAMP
Q819, 820
RV805
DIA PATTERN CENTER (2)
IC802 ③
IC802 ⑬
2.1Vp-p
2.2Vp-p
W306
BC Y
BC C
TO WF-1 BOARD
W304
BC/LINE
CN102
SC 180°
SC 90°
TO YS-6 BOARD
TIMING GENERATOR
CLMP
IC111 (1/2)
VD PULSE GENERATOR
VD
HD
AFC H
4.2Vp-p
3.2Vp-p
CN315
TO WF-1 BOARD
WIPE OUT
CN302
TO FT-39 BOARD
WIPE MIN
WIPE MAX
CN114
TO YS-6 BOARD
ART PULSE
+5V
IC813
WIPE ON/OFF SW
Q720
Q719
TP804
IC809
WIPE H COMPARATOR
TP808
IC810
WIPE V COMPARATOR
IC812 (1/2)
WIPE H/H̄ SW
WIPE V/V̄ SW
TP824
IC811
BC/LINE SELECT
BLNK (IC109 ⑪)
D805, 806
D803, 804
WIPE H
WIPE H̄
WIPE V̄
WIPE V
V̄ IND
H̄ IND
V IND
H IND
FT-39 BOARD (1/2) (See page 69.)
D104
D105
D108
D107
D123
D124
S104 H̄
S105 V̄
S108 V̄
S107 V̄
S106 H̄
S114
S115
ON
OFF
W001
WIPE H C
WIPE V C
WIPE V̄ C
WIPE H̄ C
WIPE PTC ●
WIPE PTD ◆
W002
W H C LED
W V C LED
W V̄ C LED
W H̄ C LED
W C ● LED
W C ◆ LED
WF-1 BOARD (See page 47.)
CN001
CN002
IC001
SYNCHRONIZE
CLOCK
IC002
TRIGGER FF
D003-006
Q001
D001, 002
Q002
D010
D007
IC003
KEY IN LOGIC
IC004
TRIGGER FF
Q003
W301
CN301
V BLNK
WIPE PTS ■
IC803
WIPE PTS ON/OFF
V BLK (IC106 ③)
IC806 (1/3)
Q116
Q113
Q112
Q115
Q114
Q117
Q125, 130
W304
CLMP 3
BLK
TO WF-1 BOARD
CN130
BLNK
SYNC
CLMP 1
TO YS-6 BOARD
CN114
CLMP 2
V BLNK
CLAMP
Q801
RIPPLE FILTER
+9V
Q802
-9V
IC111 ⑤

3-4. AUDIO/POWER BLOCK DIAGRAM


JK-44 BOARD (1/2)
(See page 71.)
CNJ001
AUDIO LINE IN
L
R
CNJ002 (1/2)
AUDIO SOURCE IN 1
CNJ003 (1/2)
AUDIO SOURCE IN 2
RY003
Q003
RELAY DRIVE
CN051
1CH/2CH
TO IS-5 BOARD
W122
LINE IN L
LINE IN R
CN122
W120
SOURCE IN L
SOURCE IN R
CN120
IC609
LINE LEVEL CONTROL
IC608
SOURCE LEVEL CONTROL
REF
MIX
IC606 (1/2)
MIX AMP
TP607
TP606
RV601
AUDIO LEVEL(L)
RV602
AUDIO LEVEL(R)
CA-16 BOARD
(See page 63.)
IC605
FADER
Q602
POWER ON MUTE
Q603
POWER ON MUTE
IC604
BUFFER
Q606
MUTE
Q607
MUTE
TP605
Q604, 605
POWER ON MUTE
CN121
OUTPUT L1
OUTPUT L2
OUTPUT R1
OUTPUT R2
W121
(See page 71.)
JK-44 BOARD (1/2)
CNJ006 (1/2)
AUDIO OUTPUT CH1
CNJ007 (1/2)
AUDIO OUTPUT CH2
CN313
FADER CONT
FADER REF
TO WF-1 BOARD
TP609
IC603
MIC ON/OFF SW
TP602
MJ-22 BOARD
(See page 69.)
J101
MIC
W309
MIC SW
MIC IN
CN309
Q601
MIC POWER
IC601 (1/2)
MIC AMP
TP601
IC602
MIC LEVEL CONTROL
AM-13 BOARD
(See page 69.)
-6V
RV113
LINE
RV108
AUDIO MIX
W312
CN312
MIC CONT
MIC REF
SOURCE MIX CONT
SOURCE MIX REF
LINE MIX CONT
LINE MIX REF
AC-44 BOARD
(See page 75.)
S401
POWER
CN401
AC IN
BRN
BLU
TP401
TP402
F401
JW9
JW10
CN402
AC 240V
AC 220V
0V
PT401
POWER TRANSFORMER
PW-61 BOARD (See page 75.)

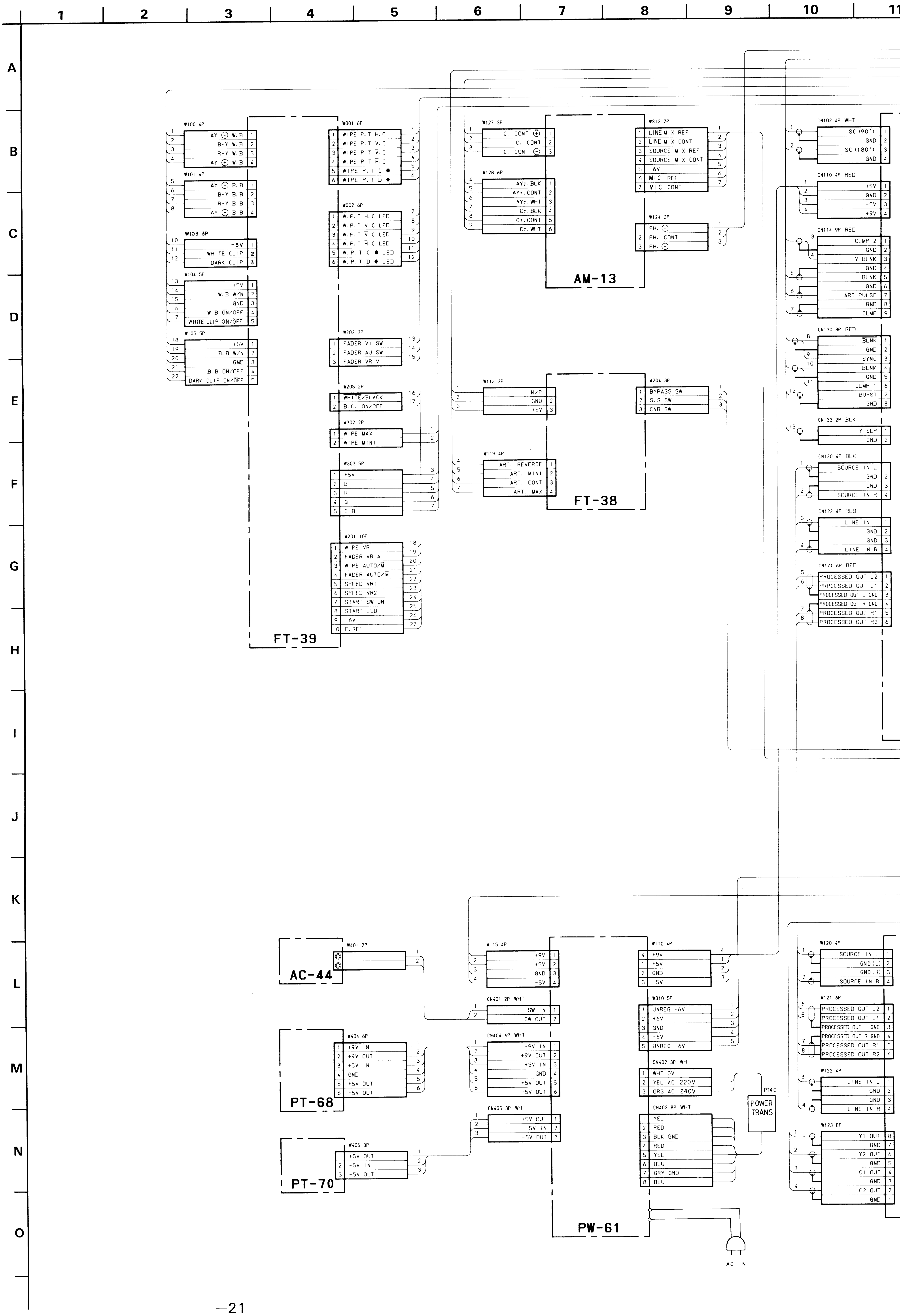

CA-16 BOARD
(See page 63.)
IC606 (1/2)
MIX AMP
TP607
RV601
AUDIO LEVEL(L)
IC605
FADER
REF
Q602
POWER ON MUTE
Q603
POWER ON MUTE
IC604
BUFFER
BUFFER
Q606
MUTE
Q607
MUTE
TP605
Q604, 605
POWER ON MUTE
(See page 71.)
JK-44 BOARD (1/2)
CN121
W121
OUTPUT L1
OUTPUT L2
OUTPUT R1
OUTPUT R2
L
R
L
R
CNJ006 (1/2)
AUDIO OUTPUT CH1
CNJ007 (1/2)
AUDIO OUTPUT CH2
IC606 (1/2)
MIX AMP
TP606
RV602
AUDIO LEVEL(R)
CN313
FADER CONT
FADER REF
TO WF-1 BOARD
IC603
MIC ON/OFF SW
TP602
IC602
MIC LEVEL CONTROL
REF
IC601 (1/2)
MIC AMP


AC-44 BOARD
(See page 75.)
S401
POWER
PT-68 BOARD (See page 76.)
IC403
IC404
+9V REG
RV401
+9V
IC405
+5V REG
PT-70 BOARD
(See page 76.)
IC406
IC407
-5V REG
RV402
-5V
W404
W405
+9V IN
+9V OUT
+5V IN
+5V OUT
-5V OUT
+5V OUT
-5V IN
-5V OUT
CN401
AC IN
BRN
BLU
TP401
TP402
F401
JW9
JW10
CN402
AC 240V
AC 220V
0V
PT401
POWER TRANSFORMER
CN403
D401, 402
+9V RECT
PS405
PS401
+9V
D403
+5V, -5V RECT
+5V
-5V
D404
+6V, -6V RECT
+6V
-6V
PS402
PS403
TP403
TP405
TP406
TP407
TP408
IC401
+6V REG
-6V REG
IC402
W115
+9V
+5V
-5V
TO YS-6 BOARD
W110
+5V
-5V
+9V
W310
UN+6V
+6V
-6V
UN-6V
TO CA-16 BOARD
PW-61 BOARD (See page 75.)

SECTION 4

PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

4-1. FRAME SCHEMATIC DIAGRAM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11
A
B
C
D
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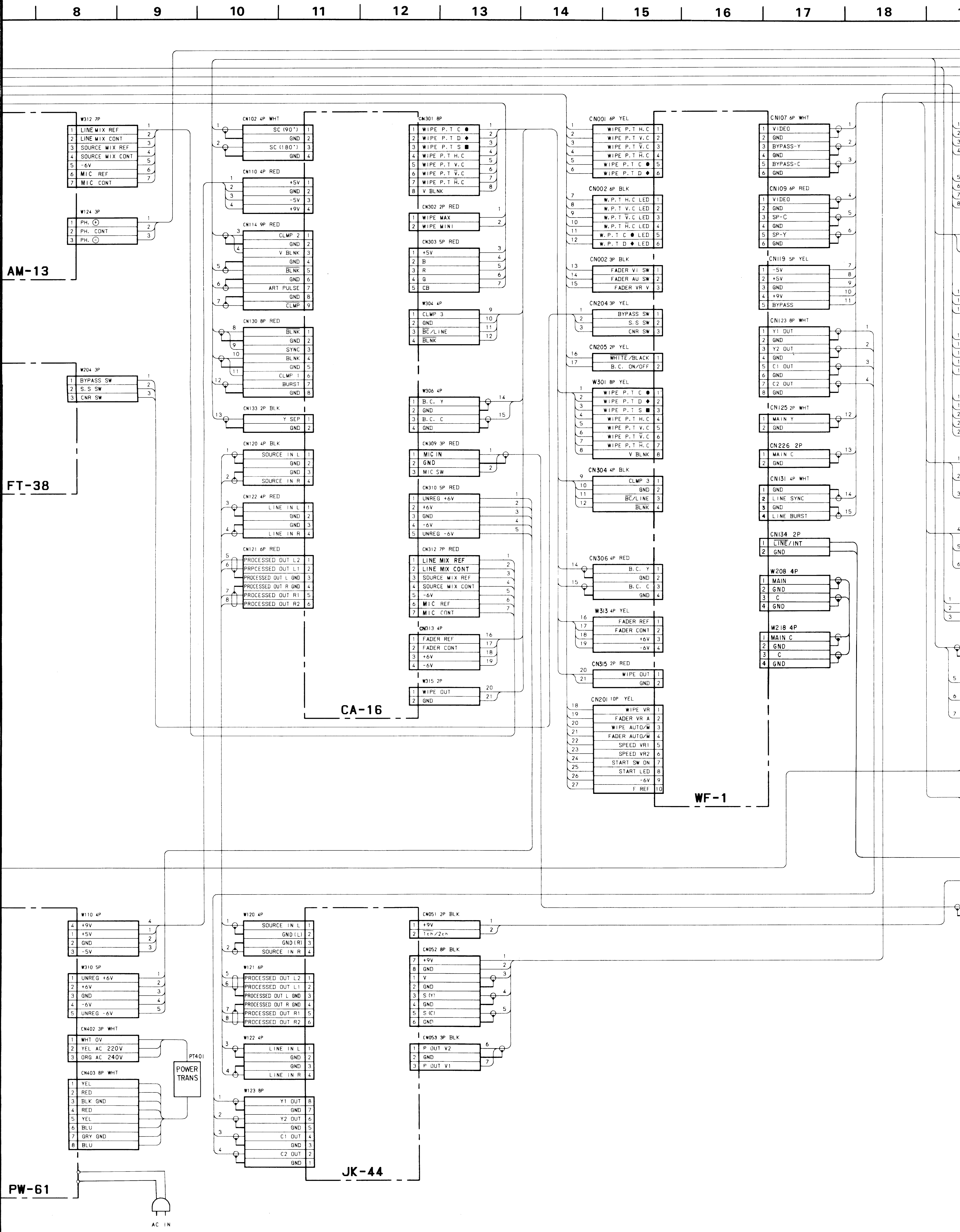
F
G
H
I
J
K
L
M
N
O
W100 4P
ΔY ⊖ W.B
B-Y W.B
R-Y W.B
ΔY ⊕ W.B
W101 4P
ΔY ⊖ B.B
B-Y B.B
R-Y B.B
ΔY ⊕ B.B
W103 3P
-5V
WHITE CLIP
DARK CLIP
W104 5P
+5V
W.B W/N
GND
W.B ON/OFF
WHITE CLIP ON/OFF
W105 5P
+5V
B.B W/N
GND
B.B ON/OFF
DARK CLIP ON/OFF
W001 6P
WIPE P.T H.C
WIPE P.T V.C
WIPE P.T V̄.C
WIPE P.T H̄.C
WIPE P.T C ●
WIPE P.T D ◆
W002 6P
W.P.T H.C LED
W.P.T V.C LED
W.P.T V̄.C LED
W.P.T H̄.C LED
W.P.T C ● LED
W.P.T D ◆ LED
W202 3P
FADER VI SW
FADER AU SW
FADER VR V
W205 2P
WHITE/BLACK
B.C. ON/OFF
W302 2P
WIPE MAX
WIPE MINI
W303 5P
+5V
B
R
G
C.B
W201 10P
WIPE VR
FADER VR A
WIPE AUTO/M̄
FADER AUTO/M̄
SPEED VR1
SPEED VR2
START SW ON
START LED
-6V
F.REF
FT-39
W127 3P
C. CONT ⊕
C. CONT
C. CONT ⊖
W128 6P
ΔYγ.BLK
ΔYγ.CONT
ΔYγ.WHT
Cγ.BLK
Cγ.CONT
Cγ.WHT
W312 7P
LINE MIX REF
LINE MIX CONT
SOURCE MIX REF
SOURCE MIX CONT
-6V
MIC REF
MIC CONT
W124 3P
PH. ⊕
PH. CONT
PH. ⊖
AM-13
W113 3P
N/P
GND
+5V
W204 3P
BYPASS SW
S.S SW
CNR SW
W119 4P
ART. REVERCE
ART. MINI
ART. CONT
ART. MAX
FT-38
CN102 4P WHT
SC (90°)
GND
SC (180°)
GND
CN110 4P RED
+5V
GND
-5V
+9V
CN114 9P RED
CLMP 2
GND
V BLNK
GND
BLNK
GND
ART PULSE
GND
CLMP
CN130 8P RED
BLNK
GND
SYNC
BLNK
GND
CLMP 1
BURST
GND
CN133 2P BLK
Y SEP
GND
CN120 4P BLK
SOURCE IN L
GND
GND
SOURCE IN R
CN122 4P RED
LINE IN L
GND
GND
LINE IN R
CN121 6P RED
PROCESSED OUT L2
PRPCESSED OUT L1
PROCESSED OUT L GND
PROCESSED OUT R GND
PROCESSED OUT R1
PROCESSED OUT R2
W401 2P
AC-44
W115 4P
+9V
+5V
GND
-5V
W110 4P
+9V
+5V
GND
-5V
CN401 2P WHT
SW IN
SW OUT
W310 5P
UNREG +6V
+6V
GND
-6V
UNREG -6V
W404 6P
+9V IN
+9V OUT
+5V IN
GND
+5V OUT
-5V OUT
PT-68
CN404 6P WHT
+9V IN
+9V OUT
+5V IN
GND
+5V OUT
-5V OUT
CN402 3P WHT
WHT 0V
YEL AC 220V
ORG AC 240V
PT401
POWER TRANS
CN405 3P WHT
+5V OUT
-5V IN
-5V OUT
CN403 8P WHT
YEL
RED
BLK GND
RED
YEL
BLU
GRY GND
BLU
W405 3P
+5V OUT
-5V IN
-5V OUT
PT-70
PW-61
AC IN
W120 4P
SOURCE IN L
GND (L)
GND (R)
SOURCE IN R
W121 6P
PROCESSED OUT L2
PROCESSED OUT L1
PROCESSED OUT L GND
PROCESSED OUT R GND
PROCESSED OUT R1
PROCESSED OUT R2
W122 4P
LINE IN L
GND
GND
LINE IN R
W123 8P
Y1 OUT
GND
Y2 OUT
GND
C1 OUT
GND
C2 OUT
GND



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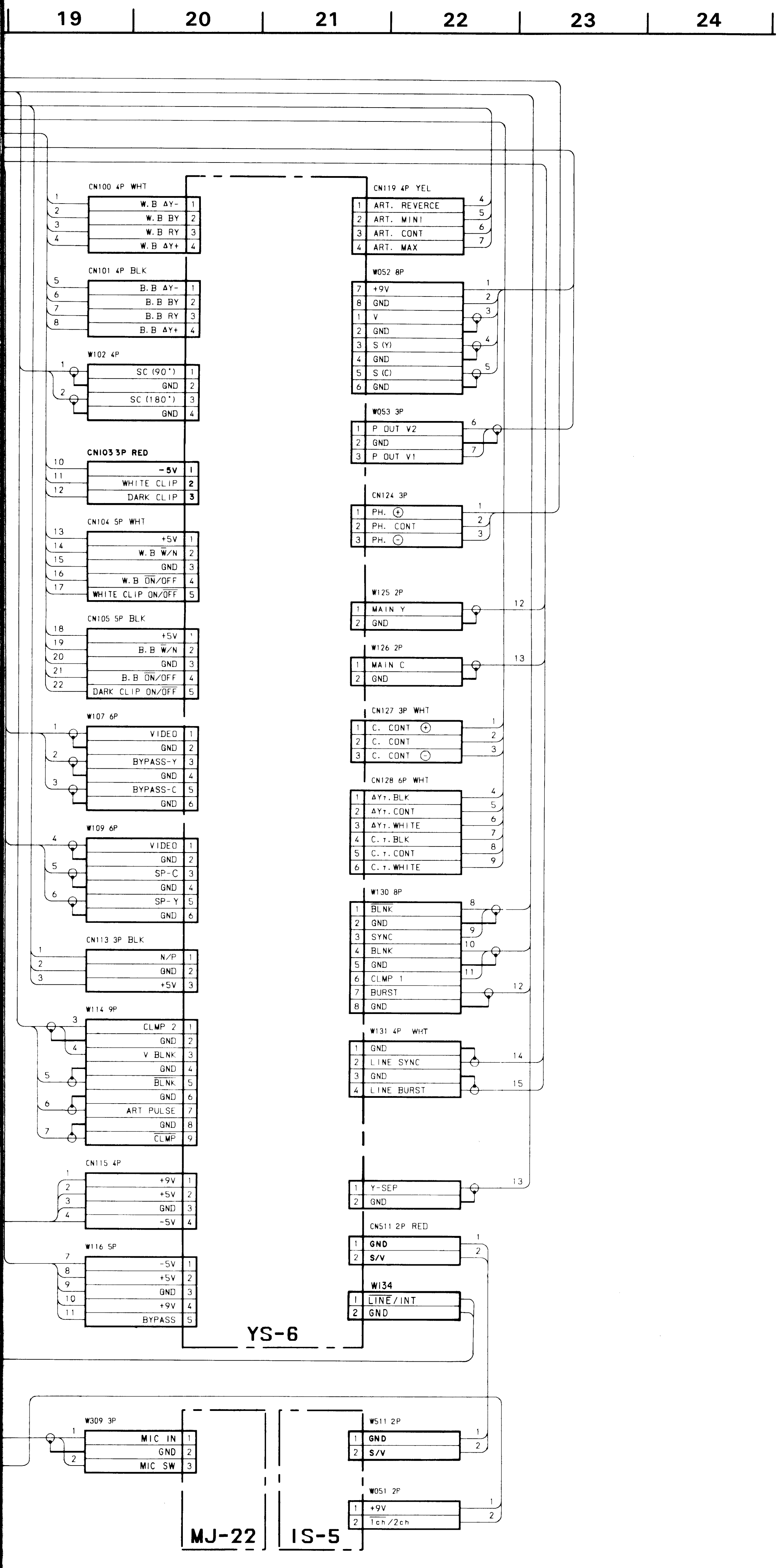
11
12
13
14
15
16
17
18
AM-13
FT-38
PW-61
CA-16
WF-1
JK-44
W312 7P
W124 3P
W204 3P
W110 4P
W310 5P
CN402 3P WHT
CN403 8P WHT
PT401
POWER TRANS
AC IN
CN102 4P WHT
CN110 4P RED
CN114 9P RED
CN130 8P RED
CN133 2P BLK
CN120 4P BLK
CN122 4P RED
CN121 6P RED
CN301 8P
CN302 2P RED
CN303 5P RED
W304 4P
W306 4P
CN309 3P RED
CN310 5P RED
CN312 7P RED
CN313 4P
W315 2P
CN001 6P YEL
CN002 6P BLK
CN002 3P BLK
CN204 3P YEL
CN205 2P YEL
W301 8P YEL
CN304 4P BLK
CN306 4P RED
W313 4P YEL
CN315 2P RED
CN201 10P YEL
CN107 6P WHT
CN109 6P RED
CN119 5P YEL
CN123 8P WHT
CN125 2P WHT
CN226 2P
CN131 4P WHT
CN134 2P
W208 4P
W218 4P
W120 4P
W121 6P
W122 4P
W123 8P
CN051 2P BLK
CN052 8P BLK
CN053 3P BLK
LINE MIX REF
LINE MIX CONT
SOURCE MIX REF
SOURCE MIX CONT
-6V
MIC REF
MIC CONT
PH. ⊕
PH. CONT
PH. ⊖
BYPASS SW
S.S SW
CNR SW
SC (90°)
SC (180°)
GND
+5V
-5V
+9V
CLMP 2
V BLNK
BLNK
ART PULSE
CLMP
SYNC
CLMP 1
BURST
Y SEP
SOURCE IN L
SOURCE IN R
LINE IN L
LINE IN R
PROCESSED OUT L2
PRPCESSED OUT L1
PROCESSED OUT L GND
PROCESSED OUT R GND
PROCESSED OUT R1
PROCESSED OUT R2
WIPE P.T C ●
WIPE P.T D ◆
WIPE P.T S ■
WIPE P.T H.C
WIPE P.T V.C
WIPE P.T V̄.C
WIPE P.T H̄.C
V BLNK
WIPE MAX
WIPE MINI
B
R
G
CB
CLMP 3
BC/LINE
B.C. Y
B.C. C
MIC IN
MIC SW
UNREG +6V
+6V
UNREG -6V
FADER REF
FADER CONT
WIPE OUT
W.P.T H.C LED
W.P.T V.C LED
W.P.T V̄.C LED
W.P.T H̄.C LED
W.P.T C ● LED
W.P.T D ◆ LED
FADER VI SW
FADER AU SW
FADER VR V
WHITE/BLACK
B.C. ON/OFF
WIPE VR
FADER VR A
WIPE AUTO/M
FADER AUTO/M
SPEED VR1
SPEED VR2
START SW ON
START LED
F REF
VIDEO
BYPASS-Y
BYPASS-C
SP-C
SP-Y
BYPASS
Y1 OUT
Y2 OUT
C1 OUT
C2 OUT
MAIN Y
MAIN C
LINE SYNC
LINE BURST
LINE/INT
MAIN
C
WHT 0V
YEL AC 220V
ORG AC 240V
YEL
RED
BLK GND
BLU
GRY GND
GND(L)
GND(R)
1ch/2ch
V
S(Y)
S(C)
P OUT V2
P OUT V1


19
20
21
22
23
24
CN100 4P WHT
W.B ΔY-
W.B BY
W.B RY
W.B ΔY+
CN101 4P BLK
B.B ΔY-
B.B BY
B.B RY
B.B ΔY+
W102 4P
SC (90°)
GND
SC (180°)
GND
CN103 3P RED
-5V
WHITE CLIP
DARK CLIP
CN104 5P WHT
+5V
W.B W/N
GND
W.B ON/OFF
WHITE CLIP ON/OFF
CN105 5P BLK
+5V
B.B W/N
GND
B.B ON/OFF
DARK CLIP ON/OFF
W107 6P
VIDEO
GND
BYPASS-Y
GND
BYPASS-C
GND
W109 6P
VIDEO
GND
SP-C
GND
SP-Y
GND
CN113 3P BLK
N/P
GND
+5V
W114 9P
CLMP 2
GND
V BLNK
GND
BLNK
GND
ART PULSE
GND
CLMP
CN115 4P
+9V
+5V
GND
-5V
W116 5P
-5V
+5V
GND
+9V
BYPASS
YS-6
CN119 4P YEL
ART. REVERCE
ART. MINI
ART. CONT
ART. MAX
W052 8P
+9V
GND
V
GND
S (Y)
GND
S (C)
GND
W053 3P
P OUT V2
GND
P OUT V1
CN124 3P
PH. ⊕
PH. CONT
PH. ⊖
W125 2P
MAIN Y
GND
W126 2P
MAIN C
GND
CN127 3P WHT
C. CONT ⊕
C. CONT
C. CONT ⊖
CN128 6P WHT
ΔYτ.BLK
ΔYτ.CONT
ΔYτ.WHITE
C.τ.BLK
C.τ.CONT
C.τ.WHITE
W130 8P
BLNK
GND
SYNC
BLNK
GND
CLMP 1
BURST
GND
W131 4P WHT
GND
LINE SYNC
GND
LINE BURST
Y-SEP
GND
CN511 2P RED
GND
S/V
W134
LINE/INT
GND
W309 3P
MIC IN
GND
MIC SW
MJ-22
IS-5
W511 2P
GND
S/V
W051 2P
+9V
1ch/2ch

4-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.

(In addition to this, the necessary note is printed in each block.)

- **For Printed Wiring Board:**

Note:

- ▨ : Pattern from the side which enables seeing.
- Circled numbers refer to waveforms.

- **For Schematic Diagram:**

Note:

- All resistors are in ohms, 1/4W unless otherwise noted.
  Chip resistor are 1/10W unless otherwise noted.
  kΩ: 1000Ω, MΩ: 1000kΩ.
- All capacitors are in μF unless otherwise noted. pF : μμF.
  50V or less are not indicated except for electrolytics and tantalums.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- ⊟ : nonflammable resistor.
- ▭ : panel designation.
- ▭ : adjustment for repair. *
- ━ : B + Line *
- ╍ : B – Line. *
- ⇨ : IN/OUT direction of B(+, –) line. *

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

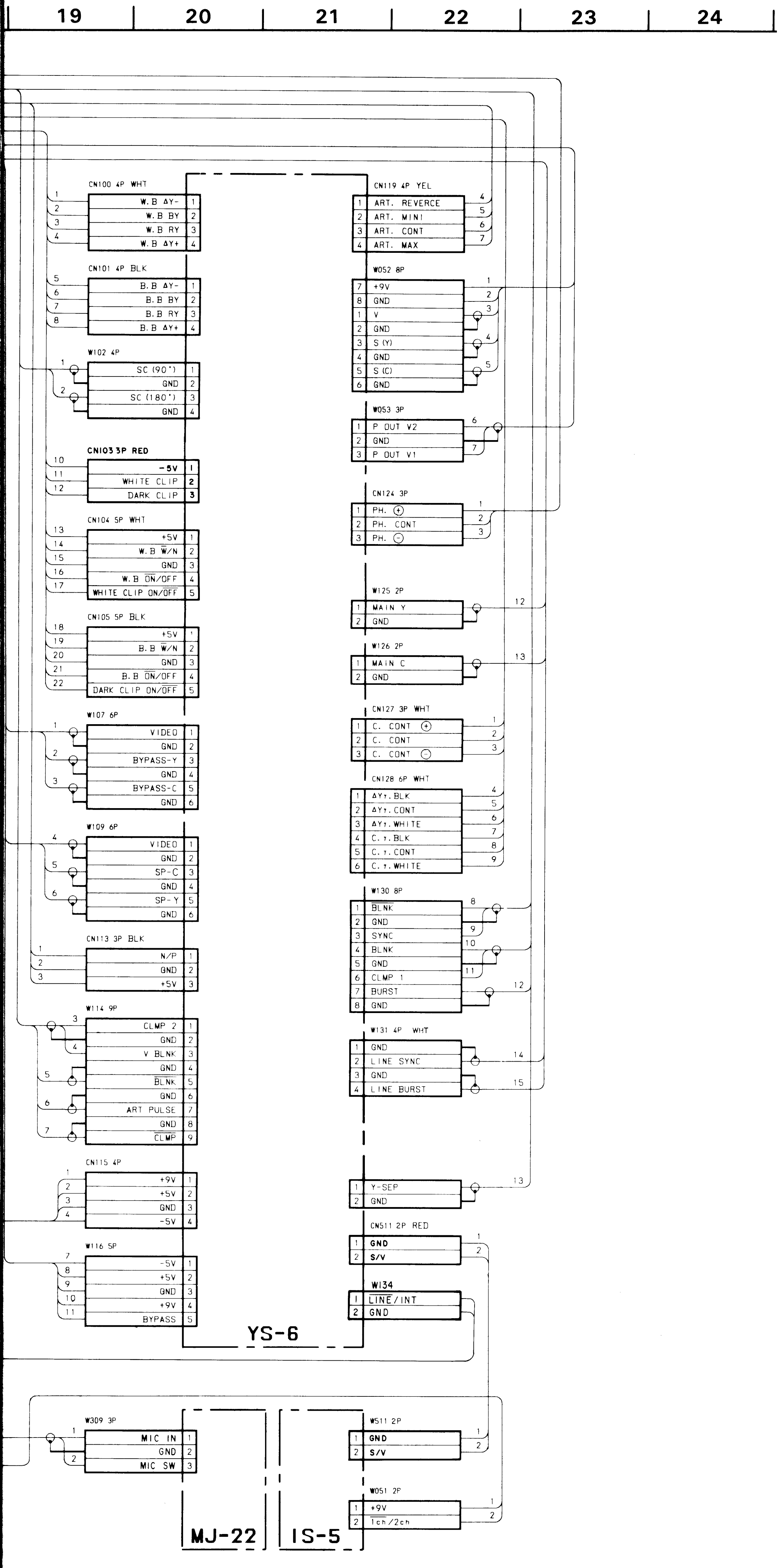
When indicating parts by reference number, please include the board name.

- For voltages and waveforms.
- Voltages are dc between ground and measurement points. *
- Readings are taken with a color-bar signal input. *
- Readings are taken with a digital multimeter (DC10MΩ). *
- Voltage variations may be noted due to normal production tolerances. *

VIDEO CH1	: ON
BYPASS	: OFF
SPLIT SCREEN	: OFF
CHROMA NR	: OFF
REVERSE	: POSI
COLOR CORRECT:	OFF
WIPE	: OFF
FADER VIDEO	: ON
FADER AUDIO	: OFF
COLOR SELECT	: COLOR BAR
FADER VR	: LOWER

Set the control knob to the mechanical center position unless otherwise noted.

* : indicated by the color red.


19
20
21
22
23
24
CN100 4P WHT
W.B ΔY-
W.B BY
W.B RY
W.B ΔY+
CN101 4P BLK
B.B ΔY-
B.B BY
B.B RY
B.B ΔY+
W102 4P
SC (90°)
GND
SC (180°)
CN103 3P RED
-5V
WHITE CLIP
DARK CLIP
CN104 5P WHT
+5V
W.B W/N
W.B ON/OFF
WHITE CLIP ON/OFF
CN105 5P BLK
B.B W/N
B.B ON/OFF
DARK CLIP ON/OFF
W107 6P
VIDEO
BYPASS-Y
BYPASS-C
W109 6P
SP-C
SP-Y
CN113 3P BLK
N/P
W114 9P
CLMP 2
V BLNK
BLNK
ART PULSE
CLMP
CN115 4P
+9V
W116 5P
BYPASS
YS-6
CN119 4P YEL
ART. REVERCE
ART. MINI
ART. CONT
ART. MAX
W052 8P
V
S (Y)
S (C)
W053 3P
P OUT V2
P OUT V1
CN124 3P
PH. ⊕
PH. CONT
PH. ⊖
W125 2P
MAIN Y
W126 2P
MAIN C
CN127 3P WHT
C. CONT ⊕
C. CONT
C. CONT ⊖
CN128 6P WHT
ΔYτ.BLK
ΔYτ.CONT
ΔYτ.WHITE
C.τ.BLK
C.τ.CONT
C.τ.WHITE
W130 8P
BLNK
SYNC
CLMP 1
BURST
W131 4P WHT
LINE SYNC
LINE BURST
Y-SEP
CN511 2P RED
S/V
W134
LINE/INT
W309 3P
MIC IN
MIC SW
MJ-22
IS-5
W511 2P
W051 2P
+9V
1ch/2ch

4-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

• For Printed Wiring Board:
Note:

- ▨ : Pattern from the side which enables seeing.
- Circled numbers refer to waveforms.

• For Schematic Diagram:
Note:

- All resistors are in ohms, 1/4W unless otherwise noted.
  Chip resistor are 1/10W unless otherwise noted.
  kΩ: 1000Ω, MΩ: 1000kΩ.
- All capacitors are in μF unless otherwise noted. pF : μμF.
  50V or less are not indicated except for electrolytics and tantalums.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- ▭ : nonflammable resistor.
- ▭ : panel designation.
- ▭ : adjustment for repair. *
- ━━ : B + Line *
- ━ ━ ━ : B – Line. *
- ⇨ : IN/OUT direction of B(+, –) line. *

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

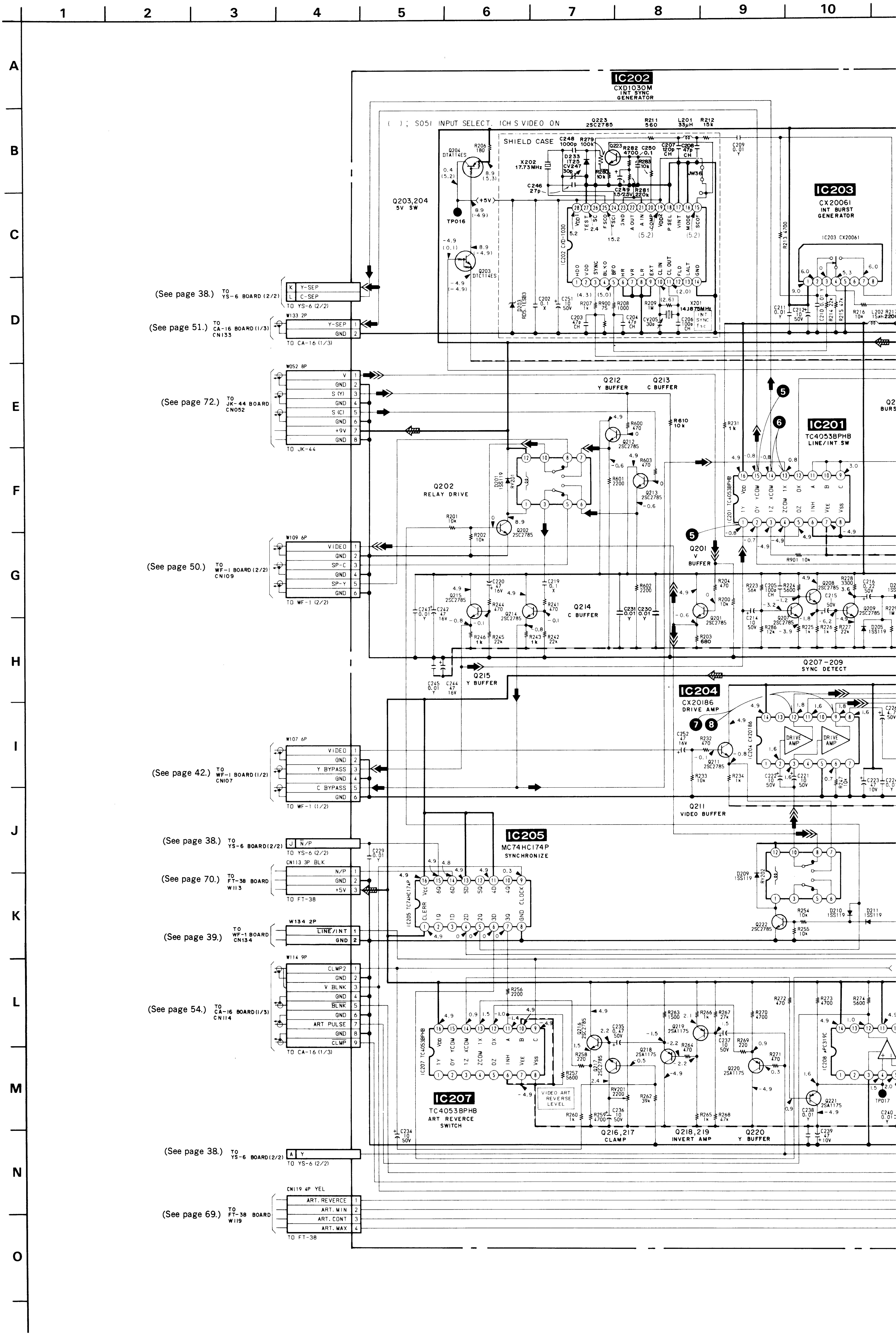
- For voltages and waveforms.
- Voltages are dc between ground and measurement points. *
- Readings are taken with a color-bar signal input. *
- Readings are taken with a digital multimeter (DC10MΩ). *
- Voltage variations may be noted due to normal production tolerances. *

VIDEO CH1 : ON
BYPASS : OFF
SPLIT SCREEN : OFF
CHROMA NR : OFF
REVERSE : POSI
COLOR CORRECT: OFF
WIPE : OFF
FADER VIDEO : ON
FADER AUDIO : OFF
COLOR SELECT : COLOR BAR
FADER VR : LOWER
Set the control knob to the mechanical center position unless otherwise noted.

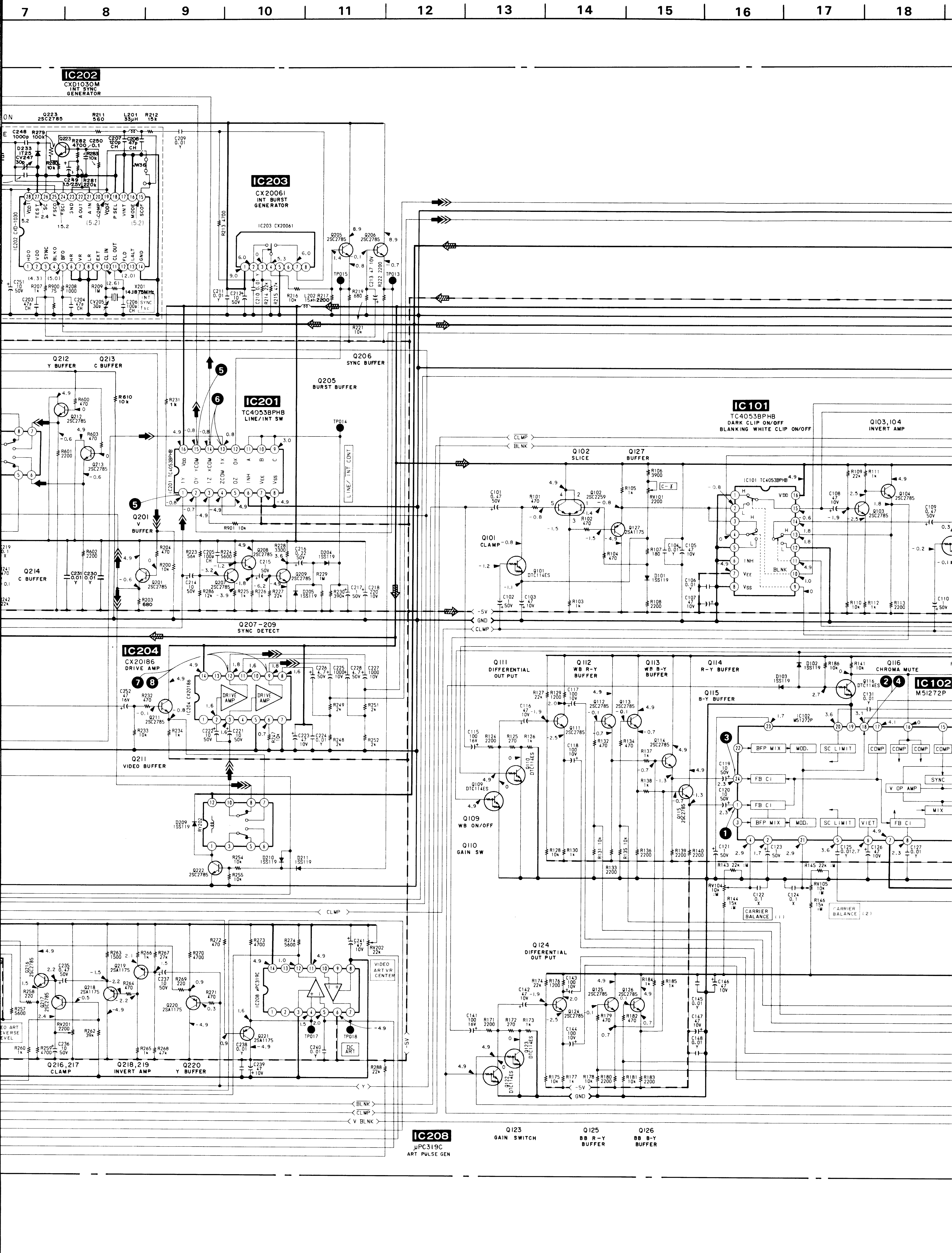
* : indicated by the color red.

YS-6 (MAIN Y/C PROCESS) SCHEMATIC DIAGRAM

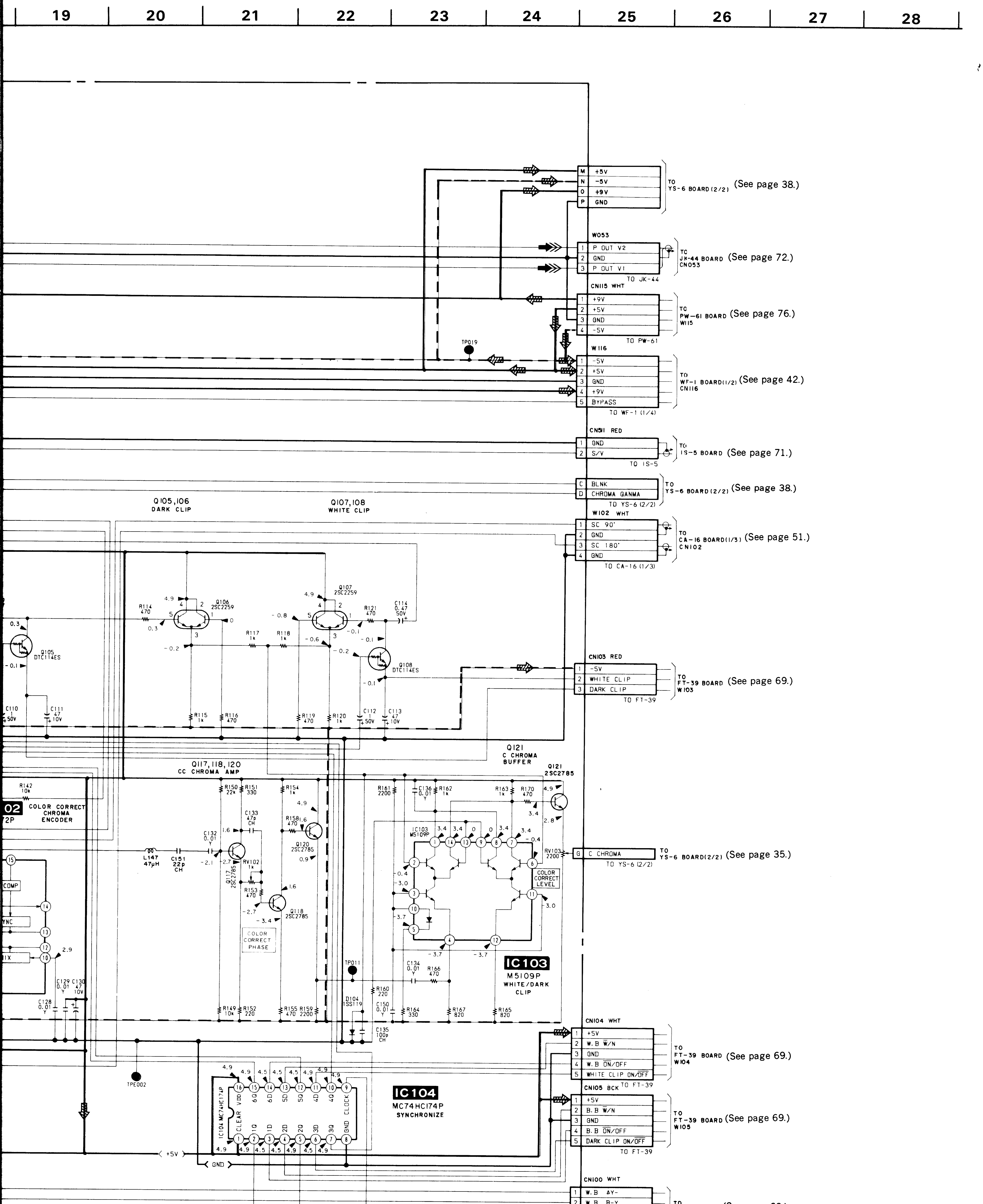
—Ref. No. YS-6 BOARD: 1000 series—



IC202 CXD1030M INT SYNC GENERATOR
( ) ; S051 INPUT SELECT. ICH S VIDEO ON
SHIELD CASE
Q203,204 5V SW
TP016
IC203 CX20061 INT BURST GENERATOR
IC201 TC4053BPHB LINE/INT SW
Q212 Y BUFFER
Q213 C BUFFER
Q202 RELAY DRIVE
Q201 V BUFFER
Q214 C BUFFER
Q215 Y BUFFER
Q207-209 SYNC DETECT
IC204 CX20186 DRIVE AMP
Q211 VIDEO BUFFER
IC205 MC74HC174P SYNCHRONIZE
IC207 TC4053BPHB ART REVERCE SWITCH
VIDEO ART REVERSE LEVEL
Q216,217 CLAMP
Q218,219 INVERT AMP
Q220 Y BUFFER
TP017
(See page 38.) TO YS-6 BOARD (2/2)
(See page 51.) TO CA-16 BOARD (1/3) CN133
(See page 72.) TO JK-44 BOARD CN052
(See page 50.) TO WF-1 BOARD (2/2) CN109
(See page 42.) TO WF-1 BOARD (1/2) CN107
(See page 38.) TO YS-6 BOARD (2/2)
(See page 70.) TO FT-38 BOARD W113
(See page 39.) TO WF-1 BOARD CN134
(See page 54.) TO CA-16 BOARD (1/3) CN114
(See page 38.) TO YS-6 BOARD (2/2)
(See page 69.) TO FT-38 BOARD W119


IC202
CXD1030M
INT SYNC GENERATOR
IC203
CX20061
INT BURST GENERATOR
Q205
2SC2785
Q206
2SC2785
TP015
TP013
Q212
Y BUFFER
Q213
C BUFFER
Q206
SYNC BUFFER
Q205
BURST BUFFER
IC201
TC4053BPHB
LINE/INT SW
LINE / INT CONT
TP014
Q201
V BUFFER
Q214
C BUFFER
Q207-209
SYNC DETECT
IC204
CX20186
DRIVE AMP
DRIVE AMP
Q211
VIDEO BUFFER
Q222
2SC2785
D209
1SS119
RV202
IC101
TC4053BPHB
DARK CLIP ON/OFF
BLANKING WHITE CLIP ON/OFF
Q103,104
INVERT AMP
Q102
SLICE
Q127
BUFFER
Q101
CLAMP
CLMP
BLNK
-5V
GND
Q111
DIFFERENTIAL OUT PUT
Q112
WB R-Y BUFFER
Q113
WB B-Y BUFFER
Q114
R-Y BUFFER
Q115
B-Y BUFFER
Q116
CHROMA MUTE
IC102
M51272P
BFP MIX
MOD.
SC LIMIT
FB CL
COMP
SYNC
V OP AMP
MIX
VIET
Q109
WB ON/OFF
Q110
GAIN SW
CARRIER BALANCE (1)
CARRIER BALANCE (2)
Q124
DIFFERENTIAL OUT PUT
Q123
GAIN SWITCH
Q125
BB R-Y BUFFER
Q126
BB B-Y BUFFER
Q216,217
CLAMP
Q218,219
INVERT AMP
Q220
Y BUFFER
VIDEO ART REVERSE LEVEL
VIDEO ART VR CENTER
IC208
μPC319C
ART PULSE GEN
TP017
TP018
DC ART
Y
BLNK
CLMP
V BLNK
7
8
9
10
11
12
13
14
15
16
17
18

VIDEO (1/4)

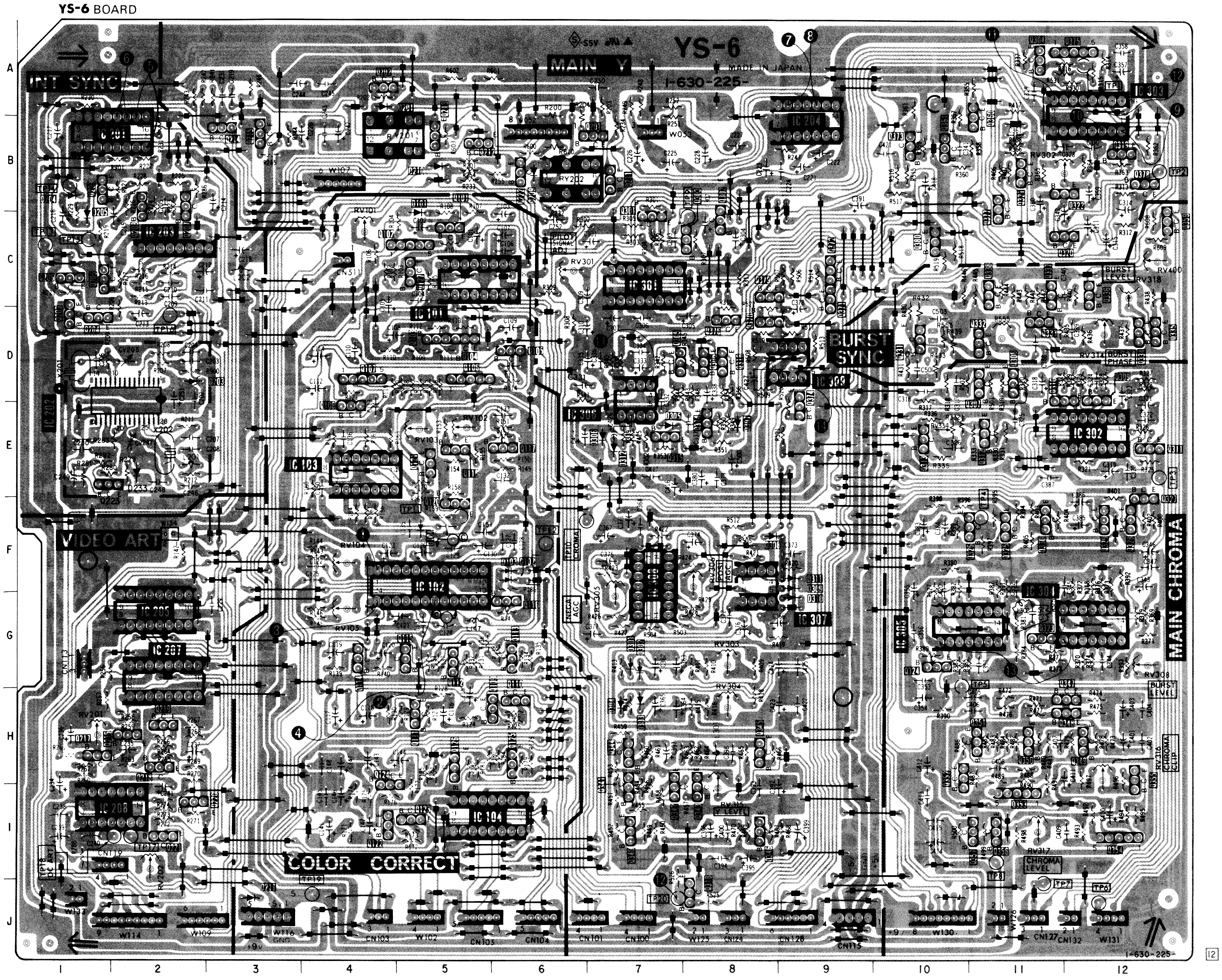

19
20
21
22
23
24
25
26
27
28
+5V
-5V
+9V
GND
TO YS-6 BOARD(2/2) (See page 38.)
W053
P OUT V2
GND
P OUT V1
TO JK-44
TO JK-44 BOARD CN053 (See page 72.)
CN115 WHT
+9V
+5V
GND
-5V
TO PW-61
TO PW-61 BOARD W115 (See page 76.)
TP019
W116
-5V
+5V
GND
+9V
BYPASS
TO WF-1 (1/4)
TO WF-1 BOARD(1/2) CN116 (See page 42.)
CN511 RED
GND
S/V
TO IS-5
TO IS-5 BOARD (See page 71.)
BLNK
CHROMA GANMA
TO YS-6 (2/2)
TO YS-6 BOARD(2/2) (See page 38.)
W102 WHT
SC 90°
GND
SC 180°
GND
TO CA-16 (1/3)
TO CA-16 BOARD(1/3) CN102 (See page 51.)
Q105,106 DARK CLIP
Q107,108 WHITE CLIP
Q106 2SC2259
Q107 2SC2259
Q105 DTC114ES
Q108 DTC114ES
CN103 RED
-5V
WHITE CLIP
DARK CLIP
TO FT-39
TO FT-39 BOARD W103 (See page 69.)
Q121 C CHROMA BUFFER
Q121 2SC2785
Q117,118,120 CC CHROMA AMP
02 COLOR CORRECT CHROMA ENCODER
Q117 2SC2785
Q118 2SC2785
Q120 2SC2785
COLOR CORRECT PHASE
IC103 M5109P
IC103 M5109P WHITE/DARK CLIP
COLOR CORRECT LEVEL
RV103 2200
C CHROMA
TO YS-6 (2/2)
TO YS-6 BOARD(2/2) (See page 35.)
TP011
TPE002
D104 1SS119
CN104 WHT
+5V
W.B W/N
GND
W.B ON/OFF
WHITE CLIP ON/OFF
TO FT-39
TO FT-39 BOARD W104 (See page 69.)
IC104 MC74HC174P SYNCHRONIZE
CN105 BCK
+5V
B.B W/N
GND
B.B ON/OFF
DARK CLIP ON/OFF
TO FT-39
TO FT-39 BOARD W105 (See page 69.)
+5V
GND
CN100 WHT
W.B ΔY-
W.B B-Y
W.B R-Y
W.B ΔY+
TO FT-39 BOARD W100 (See page 69.)
CN101 BCK
B.B ΔY-
B.B B-Y
B.B R-Y
B.B ΔY+
TO FT-39
TO FT-39 BOARD W101 (See page 69.)
YS-6 BOARD (1/2)

- **Signal path**
  - ➡➡ : REC Y Signal
  - ➡ : REC CHROMA Signal
  - ➡➡➡ : REC Y/CHROMA Signal

VIDEO (1/4) VIDEO (1/4)

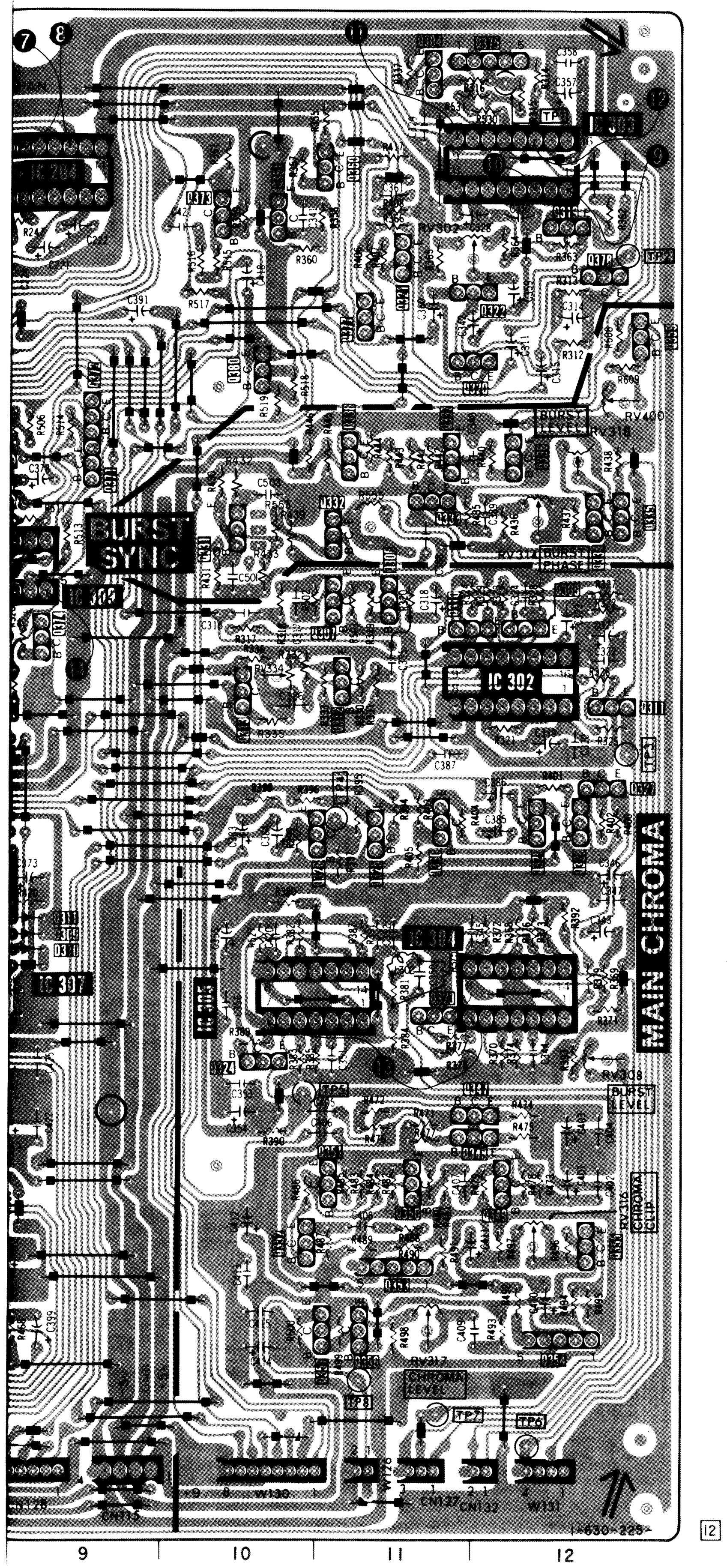
YS-6 (MAIN Y/C PROCESS) PRINTED WIRING BOARD

—Ref. No. YS-6 BOARD : 1000 series—


YS-6 BOARD
YS-6
1-630-225-
MADE IN JAPAN
MAIN Y
INT SYNC
VIDEO ART
COLOR CORRECT
BURST SYNC
MAIN CHROMA
PILOT SIGNAL ADJ
BURST LEVEL
BURST PHASE
NEGA AGC
POSI AGC
TP10 CHROMA
Y LEVEL
CHROMA LEVEL
CHROMA CLIP
IC101
IC102
IC103
IC104
IC201
IC202
IC203
IC204
IC205
IC207
IC208
IC301
IC302
IC303
IC304
IC305
IC306
IC307
IC308
IC309
RV101
RV102
RV103
RV104
RV105
RV201
RV301
RV302
RV303
RV304
RV305
RV308
RV316
RV317
RV318
RV400
RY201
RY202
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
TP12
TP13
TP14
TP17
TP18
TP19
TP20
CN100
CN101
CN103
CN104
CN105
CN112
CN113
CN115
CN124
CN127
CN128
CN132
W102
W107
W109
W114
W116
W125
W130
W131
W132
+9V
GND
A
B
C
D
E
F
G
H
I
J
1
2
3
4
5
6
7
8
9
10
11
12

YS-6 BOARD

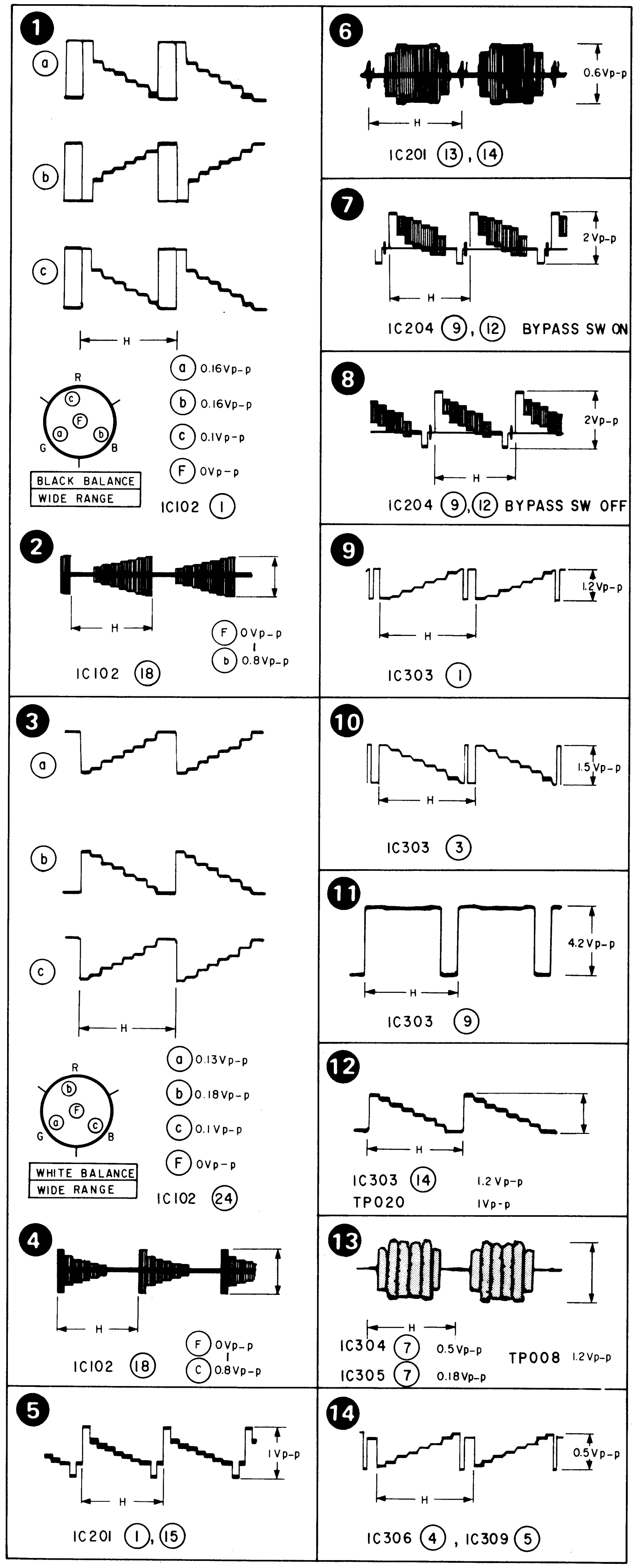
D101	C-5
D102	G-6
D103	G-6
D104	F-5
D201	B-4
D203	D-2
D204	B-1
D205	C-1
D209	B-6
D210	B-5
D211	J-3
D233	E-2
D301	H-7
D302	H-7
D303	H-7
D304	H-7
D305	E-7
D307	E-8
D309	G-9
D310	G-9
D311	G-9
D312	F-7
IC101	D-5
IC102	G-5
IC103	F-4
IC104	I-5
IC201	B-1
IC202	E-2
IC203	C-2
IC204	B-9
IC205	G-2
IC207	H-2
IC208	I-1
IC301	D-7
IC302	E-12
IC303	B-11
IC304	H-12
IC305	H-11
IC306	E-7
IC307	G-8
IC308	G-8
IC309	E-9
Q101	C-5
Q102	C-5
Q103	D-5
Q104	D-5
Q105	D-6
Q106	E-5
Q107	E-4
Q108	E-4
Q109	H-6
Q110	H-6
Q111	H-5
Q112	H-5
Q113	H-6
Q114	H-4
Q115	H-5
Q116	G-6
Q117	F-5
Q118	F-5
Q120	F-5
Q121	F-5
Q122	I-4
Q123	I-5
Q124	I-4
Q125	I-6
Q126	I-5
Q127	D-5
Q201	B-7
Q202	B-4
Q203	D-1
Q204	D-1
Q205	C-1
Q206	C-1
Q207	C-3
Q208	C-2
Q209	B-2
Q211	B-7
Q212	B-5
Q213	B-5
Q214	B-3
Q215	B-3
Q216	H-2
Q217	H-2
Q218	H-2
Q219	H-2
Q220	I-2
Q221	I-2
Q222	C-6
Q233	E-1
Q301	C-7
Q302	C-8
Q303	C-8
Q304	A-11
Q305	D-8
Q306	D-8
Q307	E-11
Q308	E-11
Q309	E-12
Q310	E-12
Q311	F-12
Q312	F-11
Q313	F-10
Q314	E-8
Q315	E-8
Q316	D-8
Q318	J-8
Q319	B-12
Q320	C-12
Q321	C-11
Q322	C-12
Q323	H-11
Q324	H-10
Q325	F-11
Q326	F-11
Q327	F-12
Q328	F-12
Q329	F-12
Q330	F-12
Q331	E-10
Q332	E-11
Q333	E-11
Q334	E-12
Q335	E-12
Q336	D-12
Q337	D-11
Q338	D-11
Q340	I-7
Q341	I-7
Q342	I-7
Q343	I-8
Q344	H-7
Q345	H-8
Q346	I-8
Q347	H-11
Q348	H-11
Q349	I-12
Q350	I-11
Q351	I-11
Q352	I-11
Q353	I-11
Q354	J-12
Q355	I-12
Q356	J-11
Q357	J-11
Q359	C-12
Q360	B-10
Q361	B-10
Q370	D-8
Q371	D-9
Q372	D-9
Q373	B-10
Q374	E-9
Q375	A-11
Q376	D-8
Q377	C-11
Q378	C-12
Q379	D-8
Q380	C-10


BURST SYNC
MAIN CHROMA
IC 302
IC 303
IC 304
IC 307
IC 308
RV302
RV318
RV400
BURST LEVEL
BURST PHASE
RV308
BURST LEVEL
RV316
CHROMA CLIP
RV317
CHROMA LEVEL
TP1
TP2
TP6
TP7
TP8
CN128
CN113
W130
W126
CN127
CN132
W131
1-630-225-
12
9
10
11
12

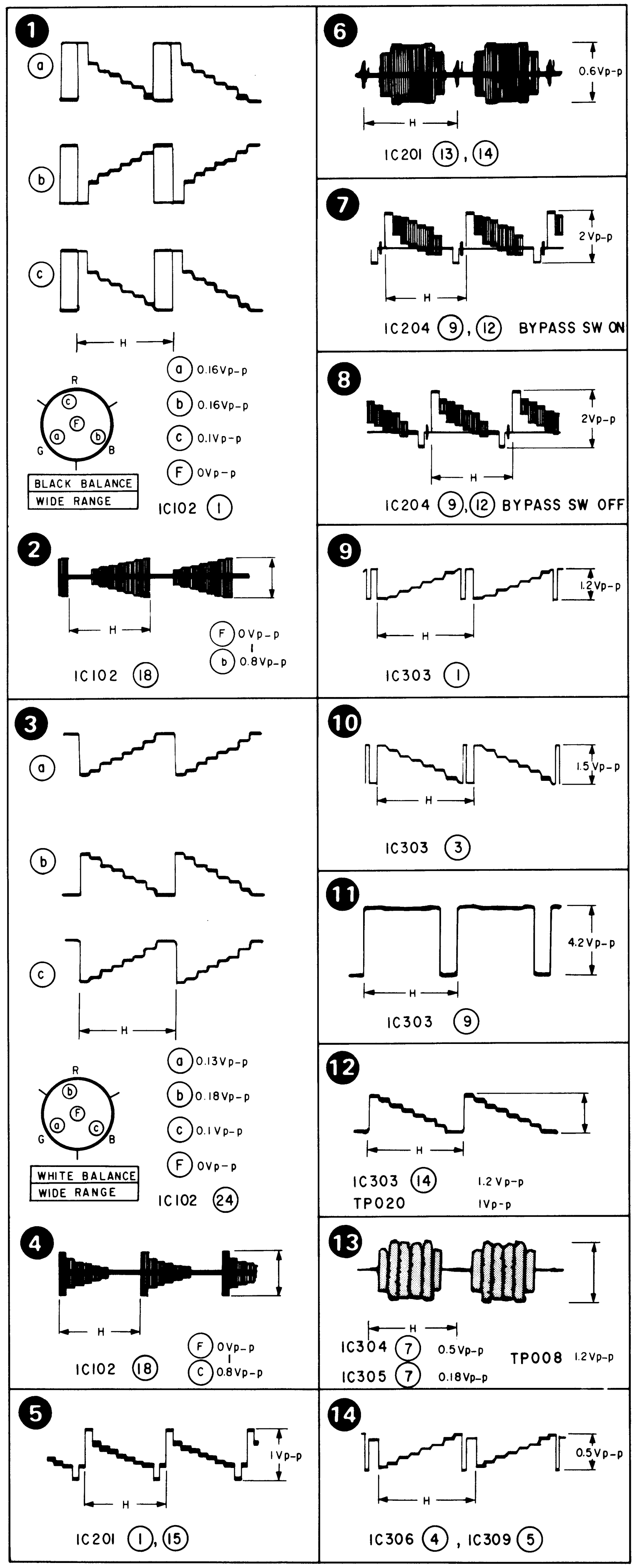
YS-6 BOARD

D101	C-5
D102	G-6
D103	G-6
D104	F-5
D201	B-4
D203	D-2
D204	B-1
D205	C-1
D209	B-6
D210	B-5
D211	J-3
D233	E-2
D301	H-7
D302	H-7
D303	H-7
D304	H-7
D305	E-7
D307	E-8
D309	G-9
D310	G-9
D311	G-9
D312	F-7
IC101	D-5
IC102	G-5
IC103	F-4
IC104	I-5
IC201	B-1
IC202	E-2
IC203	C-2
IC204	B-9
IC205	G-2
IC207	H-2
IC208	I-1
IC301	D-7
IC302	E-12
IC303	B-11
IC304	H-12
IC305	H-11
IC306	E-7
IC307	G-8
IC308	G-8
IC309	E-9
Q101	C-5
Q102	C-5
Q103	D-5
Q104	D-5
Q105	D-6
Q106	E-5
Q107	E-4
Q108	E-4
Q109	H-6
Q110	H-6
Q111	H-5
Q112	H-5
Q113	H-6
Q114	H-4
Q115	H-5
Q116	G-6
Q117	F-5
Q118	F-5
Q120	F-5
Q121	F-5
Q122	I-4
Q123	I-5
Q124	I-4
Q125	I-6
Q126	I-5
Q127	D-5
Q201	B-7
Q202	B-4
Q203	D-1
Q204	D-1
Q205	C-1
Q206	C-1
Q207	C-3
Q208	C-2
Q209	B-2
Q211	B-7
Q212	B-5
Q213	B-5
Q214	B-3
Q215	B-3
Q216	H-2
Q217	H-2
Q218	H-2
Q219	H-2
Q220	I-2
Q221	I-2
Q222	C-6
Q233	E-1
Q301	C-7
Q302	C-8
Q303	C-8
Q304	A-11
Q305	D-8
Q306	D-8
Q307	E-11
Q308	E-11
Q309	E-12
Q310	E-12
Q311	F-12
Q312	F-11
Q313	F-10
Q314	E-8
Q315	E-8
Q316	D-8
Q318	J-8
Q319	B-12
Q320	C-12
Q321	C-11
Q322	C-12
Q323	H-11
Q324	H-10
Q325	F-11
Q326	F-11
Q327	F-12
Q328	F-12
Q329	F-12
Q330	F-12
Q331	E-10
Q332	E-11
Q333	E-11
Q334	E-12
Q335	E-12
Q336	D-12
Q337	D-11
Q338	D-11
Q340	I-7
Q341	I-7
Q342	I-7
Q343	I-8
Q344	H-7
Q345	H-8
Q346	I-8
Q347	H-11
Q348	H-11
Q349	I-12
Q350	I-11
Q351	I-11
Q352	I-11
Q353	I-11
Q354	J-12
Q355	I-12
Q356	J-11
Q357	J-11
Q359	C-12
Q360	B-10
Q361	B-10
Q370	D-8
Q371	D-9
Q372	D-9
Q373	B-10
Q374	E-9
Q375	A-11
Q376	D-8
Q377	C-11
Q378	C-12
Q379	D-8
Q380	C-10

YS-6 BOARD


1
a
b
c
H
a 0.16Vp-p
b 0.16Vp-p
c 0.1Vp-p
F 0Vp-p
R
c
F
a
B
G
BLACK BALANCE
WIDE RANGE
IC102 ①
2
H
F 0Vp-p
b 0.8Vp-p
IC102 ⑱
3
a
b
c
H
a 0.13Vp-p
b 0.18Vp-p
c 0.1Vp-p
F 0Vp-p
R
b
a
F
c
G
B
WHITE BALANCE
WIDE RANGE
IC102 ㉔
4
H
F 0Vp-p
c 0.8Vp-p
IC102 ⑱
5
1Vp-p
H
IC201 ①, ⑮
6
0.6Vp-p
H
IC201 ⑬, ⑭
7
2Vp-p
H
IC204 ⑨, ⑫ BYPASS SW ON
8
2Vp-p
H
IC204 ⑨, ⑫ BYPASS SW OFF
9
1.2Vp-p
H
IC303 ①
10
1.5Vp-p
H
IC303 ③
11
4.2Vp-p
H
IC303 ⑨
12
H
IC303 ⑭ 1.2Vp-p
TP020 1Vp-p
13
H
IC304 ⑦ 0.5Vp-p
IC305 ⑦ 0.18Vp-p
TP008 1.2Vp-p
14
0.5Vp-p
H
IC306 ④, IC309 ⑤

YS-6 BOARD


1
a
b
c
H
R
G
B
F
a 0.16Vp-p
b 0.16Vp-p
c 0.1Vp-p
F 0Vp-p
BLACK BALANCE
WIDE RANGE
IC102 1
2
F 0Vp-p
b 0.8Vp-p
IC102 18
3
a 0.13Vp-p
b 0.18Vp-p
c 0.1Vp-p
F 0Vp-p
WHITE BALANCE
WIDE RANGE
IC102 24
4
F 0Vp-p
c 0.8Vp-p
IC102 18
5
1Vp-p
IC201 1, 15
6
0.6Vp-p
IC201 13, 14
7
2Vp-p
IC204 9, 12 BYPASS SW ON
8
2Vp-p
IC204 9, 12 BYPASS SW OFF
9
1.2Vp-p
IC303 1
10
1.5Vp-p
IC303 3
11
4.2Vp-p
IC303 9
12
IC303 14 1.2Vp-p
TP020 1Vp-p
13
IC304 7 0.5Vp-p
IC305 7 0.18Vp-p
TP008 1.2Vp-p
14
0.5Vp-p
IC306 4, IC309 5

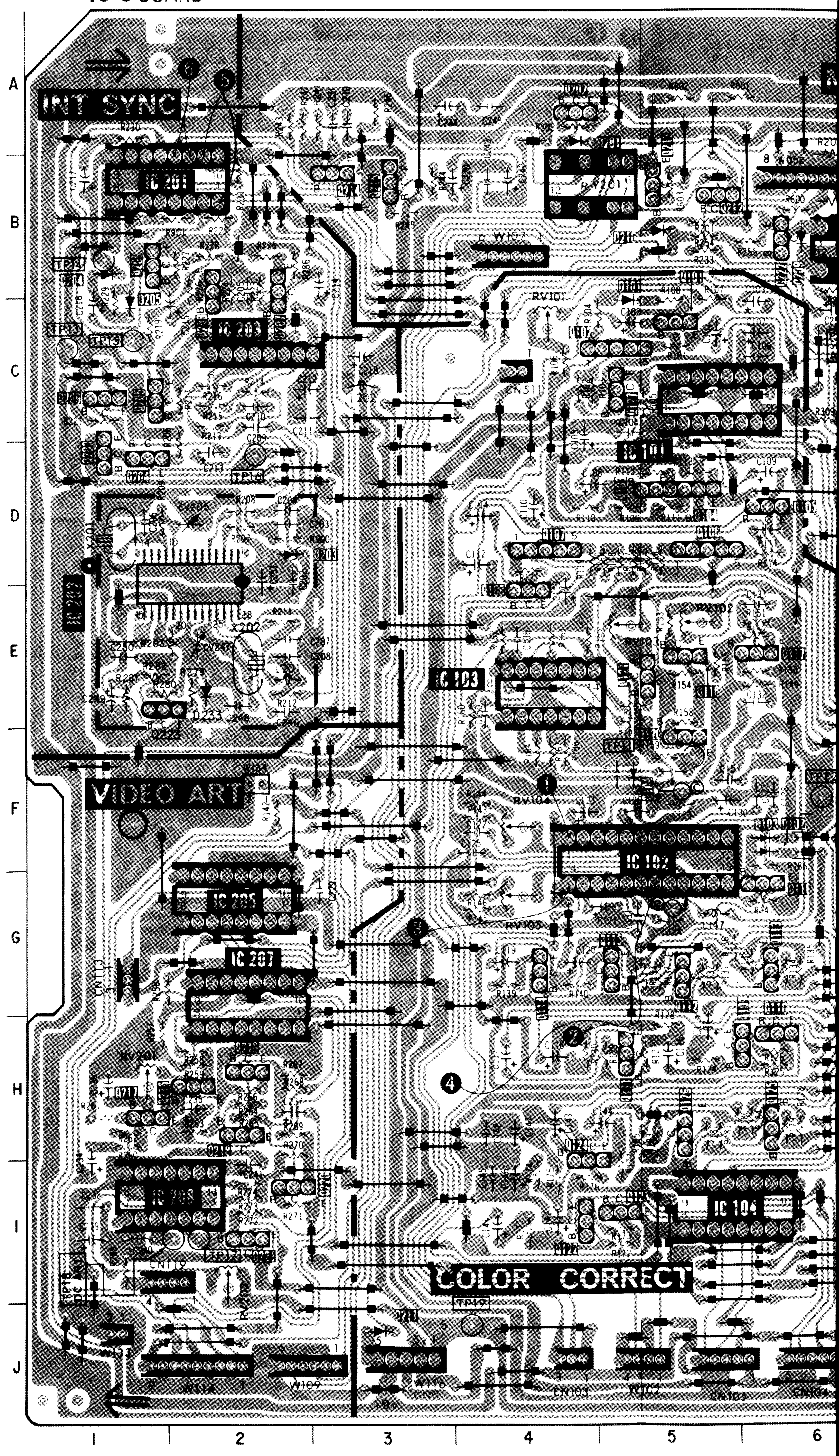
YS-6 BOARD

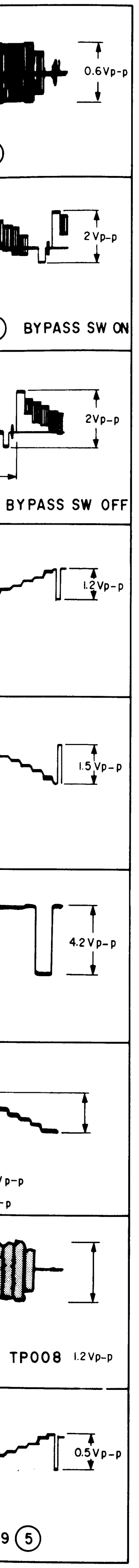
D101	C-5
D102	G-6
D103	G-6
D104	F-5
D201	B-4
D203	D-2
D204	B-1
D205	C-1
D209	B-6
D210	B-5
D211	J-3
D233	E-2
D301	H-7
D302	H-7
D303	H-7
D304	H-7
D305	E-7
D307	E-8
D309	G-9
D310	G-9
D311	G-9
D312	F-7
IC101	D-5
IC102	G-5
IC103	F-4
IC104	I-5
IC201	B-1
IC202	E-2
IC203	C-2
IC204	B-9
IC205	G-2
IC207	H-2
IC208	I-1
IC301	D-7
IC302	E-12
IC303	B-11
IC304	H-12
IC305	H-11
IC306	E-7
IC307	G-8
IC308	G-8
IC309	E-9
Q101	C-5
Q102	C-5
Q103	D-5
Q104	D-5
Q105	D-6
Q106	E-5
Q107	E-4
Q108	E-4
Q109	H-6
Q110	H-6
Q111	H-5
Q112	H-5
Q113	H-6
Q114	H-4
Q115	H-5
Q116	G-6
Q117	F-5
Q118	F-5
Q120	F-5
Q121	F-5
Q122	I-4
Q123	I-5
Q124	I-4
Q125	I-6
Q126	I-5
Q127	D-5
Q201	B-7
Q202	B-4
Q203	D-1
Q204	D-1
Q205	C-1
Q206	C-1
Q207	C-3
Q208	C-2
Q209	B-2
Q211	B-7
Q212	B-5
Q213	B-5
Q214	B-3
Q215	B-3
Q216	H-2
Q217	H-2
Q218	H-2
Q219	H-2
Q220	I-2
Q221	I-2
Q222	C-6
Q233	E-1
Q301	C-7
Q302	C-8
Q303	C-8
Q304	A-11
Q305	D-8
Q306	D-8
Q307	E-11
Q308	E-11
Q309	E-12
Q310	E-12
Q311	F-12
Q312	F-11
Q313	F-10
Q314	E-8
Q315	E-8
Q316	D-8
Q318	J-8
Q319	B-12
Q320	C-12
Q321	C-11
Q322	C-12
Q323	H-11
Q324	H-10
Q325	F-11
Q326	F-11
Q327	F-12
Q328	F-12
Q329	F-12
Q330	F-12
Q331	E-10
Q332	E-11
Q333	E-11
Q334	E-12
Q335	E-12
Q336	D-12
Q337	D-11
Q338	D-11
Q340	I-7
Q341	I-7
Q342	I-7
Q343	I-8
Q344	H-7
Q345	H-8
Q346	I-8
Q347	H-11
Q348	H-11
Q349	I-12
Q350	I-11
Q351	I-11
Q352	I-11
Q353	I-11
Q354	J-12
Q355	I-12
Q356	J-11
Q357	J-11
Q359	C-12
Q360	B-10
Q361	B-10
Q370	D-8
Q371	D-9
Q372	D-9
Q373	B-10
Q374	E-9
Q375	A-11
Q376	D-8
Q377	C-11
Q378	C-12
Q379	D-8
Q380	C-10

YS-6 (MAIN Y/C PROCESS) PRINTED WIRING BOARD

—Ref. No. YS-6 BOARD : 1000 series—

YS-6 BOARD


A
B
C
D
E
F
G
H
I
J
1
2
3
4
5
6
INT SYNC
VIDEO ART
COLOR CORRECT
IC201
IC202
IC203
IC205
IC207
IC208
IC101
IC102
IC103
IC104
RV101
RV102
RV103
RV104
RV105
RV201
CN113
CN119
CN103
CN105
CN511
W107
W114
W109
W116
W102
TP14
TP13
TP15
TP16
TP17
TP19
X201
X202
CV205
+9V
GND

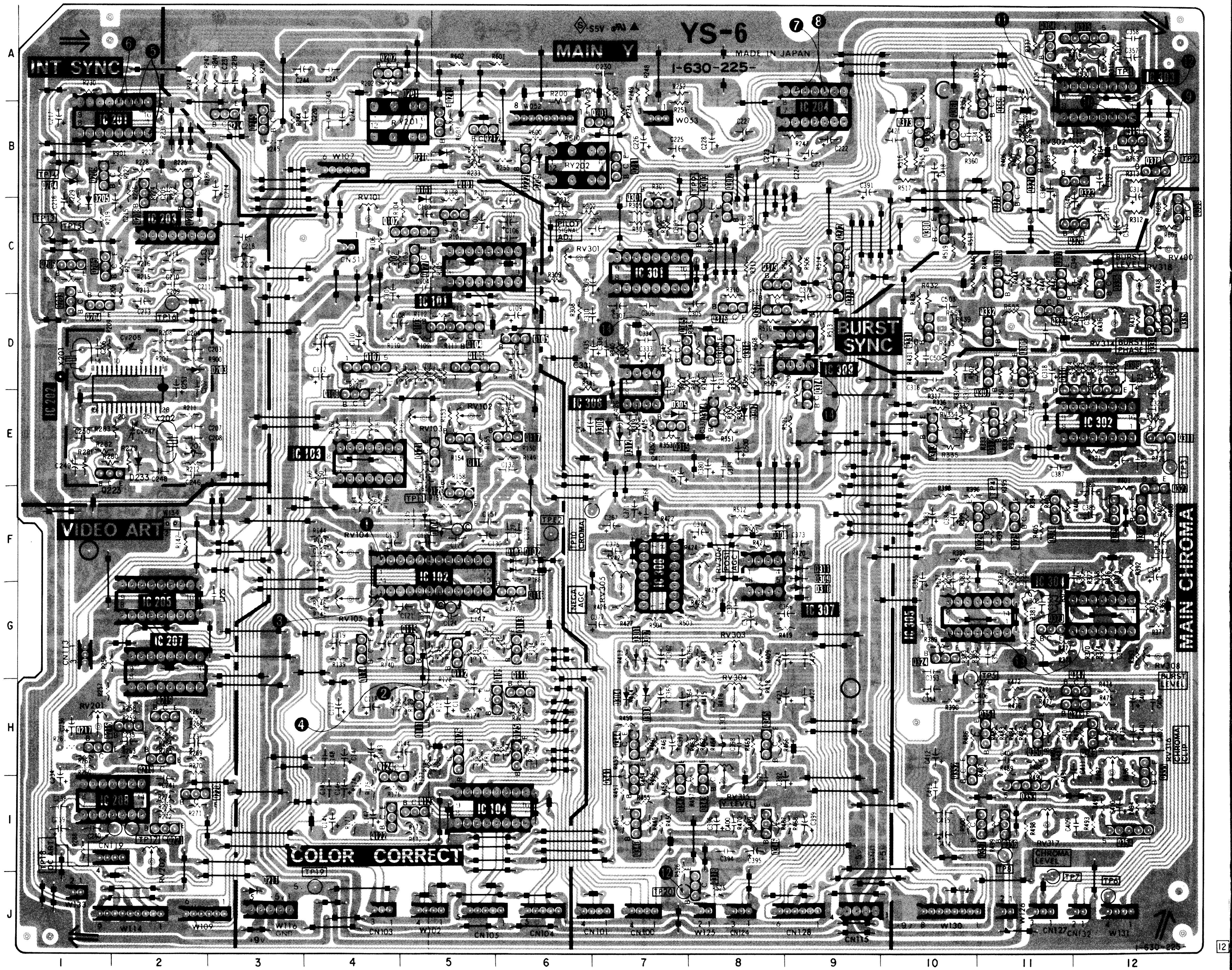

0.6Vp-p
2Vp-p
BYPASS SW ON
2Vp-p
BYPASS SW OFF
1.2Vp-p
1.5Vp-p
4.2Vp-p
TP008 1.2Vp-p
0.5Vp-p
9
⑤

YS-6 (MAIN Y/C PROCESS) PRINTED WIRING BOARD

—Ref. No. YS-6 BOARD : 1000 series—

YS-6 BOARD

D101	C-5
D102	G-6
D103	G-6
D104	F-5
D201	B-4
D203	D-2
D204	B-1
D205	C-1
D209	B-6
D210	B-5
D211	J-3
D233	E-2
D301	H-7
D302	H-7
D303	H-7
D304	H-7
D305	E-7
D307	E-8
D309	G-9
D310	G-9
D311	G-9
D312	F-7
IC101	D-5
IC102	G-5
IC103	F-4
IC104	I-5
IC201	B-1
IC202	E-2
IC203	C-2
IC204	B-9
IC205	G-2
IC207	H-2
IC208	I-1
IC301	D-7
IC302	E-12
IC303	B-11
IC304	H-12
IC305	H-11
IC306	E-7
IC307	G-8
IC308	G-8
IC309	E-9
Q101	C-5
Q102	C-5
Q103	D-5
Q104	D-5
Q105	D-6
Q106	E-5
Q107	E-4
Q108	E-4
Q109	H-6
Q110	H-6
Q111	H-5
Q112	H-5
Q113	H-6
Q114	H-4
Q115	H-5
Q116	G-6
Q117	F-5
Q118	F-5
Q120	F-5
Q121	F-5
Q122	I-4
Q123	I-5
Q124	I-4
Q125	I-6
Q126	I-5
Q127	D-5
Q201	B-7
Q202	B-4
Q203	D-1
Q204	D-1
Q205	C-1
Q206	C-1
Q207	C-3
Q208	C-2
Q209	B-2
Q211	B-7
Q212	B-5
Q213	B-5
Q214	B-3
Q215	B-3
Q216	H-2
Q217	H-2
Q218	H-2
Q219	H-2
Q220	I-2
Q221	I-2
Q222	C-6
Q233	E-1
Q301	C-7
Q302	C-8
Q303	C-8
Q304	A-11
Q305	D-8
Q306	D-8
Q307	E-11
Q308	E-11
Q309	E-12
Q310	E-12
Q311	F-12
Q312	F-11
Q313	F-10
Q314	E-8
Q315	E-8
Q316	D-8
Q318	J-8
Q319	B-12
Q320	C-12
Q321	C-11
Q322	C-12
Q323	H-11
Q324	H-10
Q325	F-11
Q326	F-11
Q327	F-12
Q328	F-12
Q329	F-12
Q330	F-12
Q331	E-10
Q332	E-11
Q333	E-11
Q334	E-12
Q335	E-12
Q336	D-12
Q337	D-11
Q338	D-11
Q340	I-7
Q341	I-7
Q342	I-7
Q343	I-8
Q344	H-7
Q345	H-8
Q346	I-8
Q347	H-11
Q348	H-11
Q349	I-12
Q350	I-11
Q351	I-11
Q352	I-11
Q353	I-11
Q354	J-12
Q355	I-12
Q356	J-11
Q357	J-11
Q359	C-12
Q360	B-10
Q361	B-10
Q370	D-8
Q371	D-9
Q372	D-9
Q373	B-10
Q374	E-9
Q375	A-11
Q376	D-8
Q377	C-11
Q378	C-12
Q379	D-8
Q380	C-10


YS-6 BOARD
YS-6
1-630-225-
MADE IN JAPAN
INT SYNC
MAIN Y
BURST SYNC
VIDEO ART
COLOR CORRECT
MAIN CHROMA
PILOT SIGNAL ADJ
NEGA AGC
POSI AGC
BURST PHASE
BURST LEVEL
Y LEVEL
CHROMA LEVEL
CHROMA CLIP
IC101
IC102
IC103
IC104
IC201
IC202
IC203
IC204
IC205
IC207
IC208
IC301
IC302
IC303
IC304
IC305
IC306
IC307
IC308
IC309
RV101
RV102
RV103
RV104
RV105
RV201
RV202
RV301
RV302
RV303
RV304
RV305
RV308
RV312
RV315
RV316
RV317
RV400
X201
X202
CN101
CN103
CN104
CN105
CN113
CN115
CN119
CN124
CN127
CN128
CN132
CN511
W102
W107
W109
W114
W116
W125
W126
W130
W131
+9V
GND
TP1
TP2
TP3
TP5
TP6
TP7
TP8
TP12
TP13
TP14
TP15
TP16
TP19
TP20
A
B
C
D
E
F
G
H
I
J
1
2
3
4
5
6
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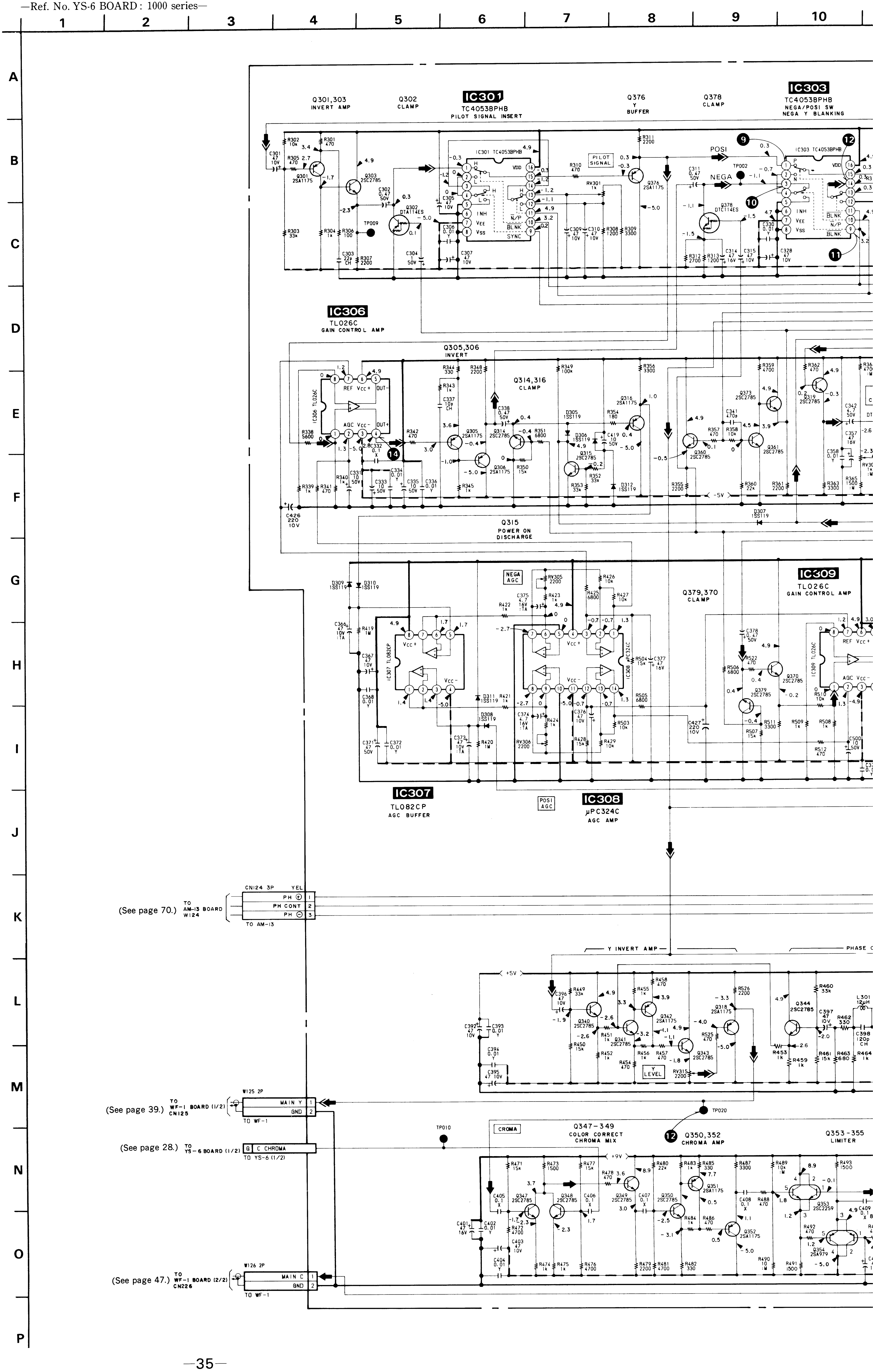
12
12

YS-6 (MAIN Y/C PROCESS) SCHEMATIC DIAGRAM

—Ref. No. YS-6 BOARD : 1000 series—



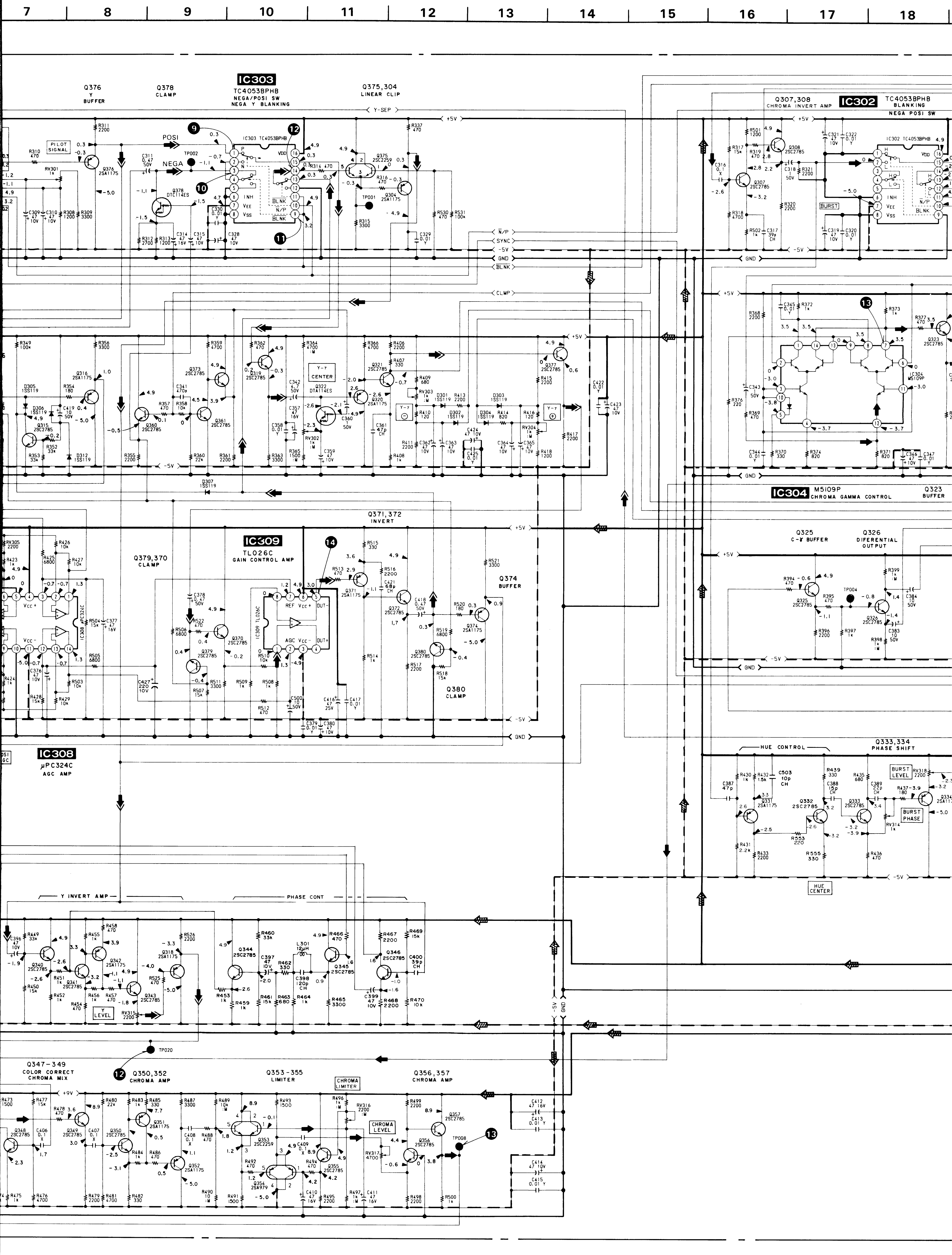
1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q301,303
INVERT AMP
Q302
CLAMP
IC301
TC4053BPHB
PILOT SIGNAL INSERT
Q376
Y
BUFFER
Q378
CLAMP
IC303
TC4053BPHB
NEGA/POSI SW
NEGA Y BLANKING
PILOT SIGNAL
POSI
NEGA
TP002
TP009
INH
VEE
VSS
VDD
BLNK
SYNC
N/P
IC306
TL026C
GAIN CONTROL AMP
Q305,306
INVERT
Q314,316
CLAMP
REF
AGC
Q315
POWER ON
DISCHARGE
NEGA
AGC
Q379,370
CLAMP
IC309
TL026C
GAIN CONTROL AMP
IC307
TL082CP
AGC BUFFER
POSI
AGC
IC308
μPC324C
AGC AMP
CN124 3P
YEL
PH ⊕
PH CONT
PH ⊖
TO AM-13
TO AM-13 BOARD W124
Y INVERT AMP
PHASE C
+5V
Y LEVEL
RV315
W125 2P
MAIN Y
GND
TO WF-1
TO WF-1 BOARD (1/2) CN125
TP020
TP010
TO YS-6 BOARD (1/2)
C CHROMA
TO YS-6 (1/2)
CROMA
Q347-349
COLOR CORRECT
CHROMA MIX
Q350,352
CHROMA AMP
Q353-355
LIMITER
+9V
W126 2P
MAIN C
GND
TO WF-1
TO WF-1 BOARD (2/2) CN226

(See page 70.)

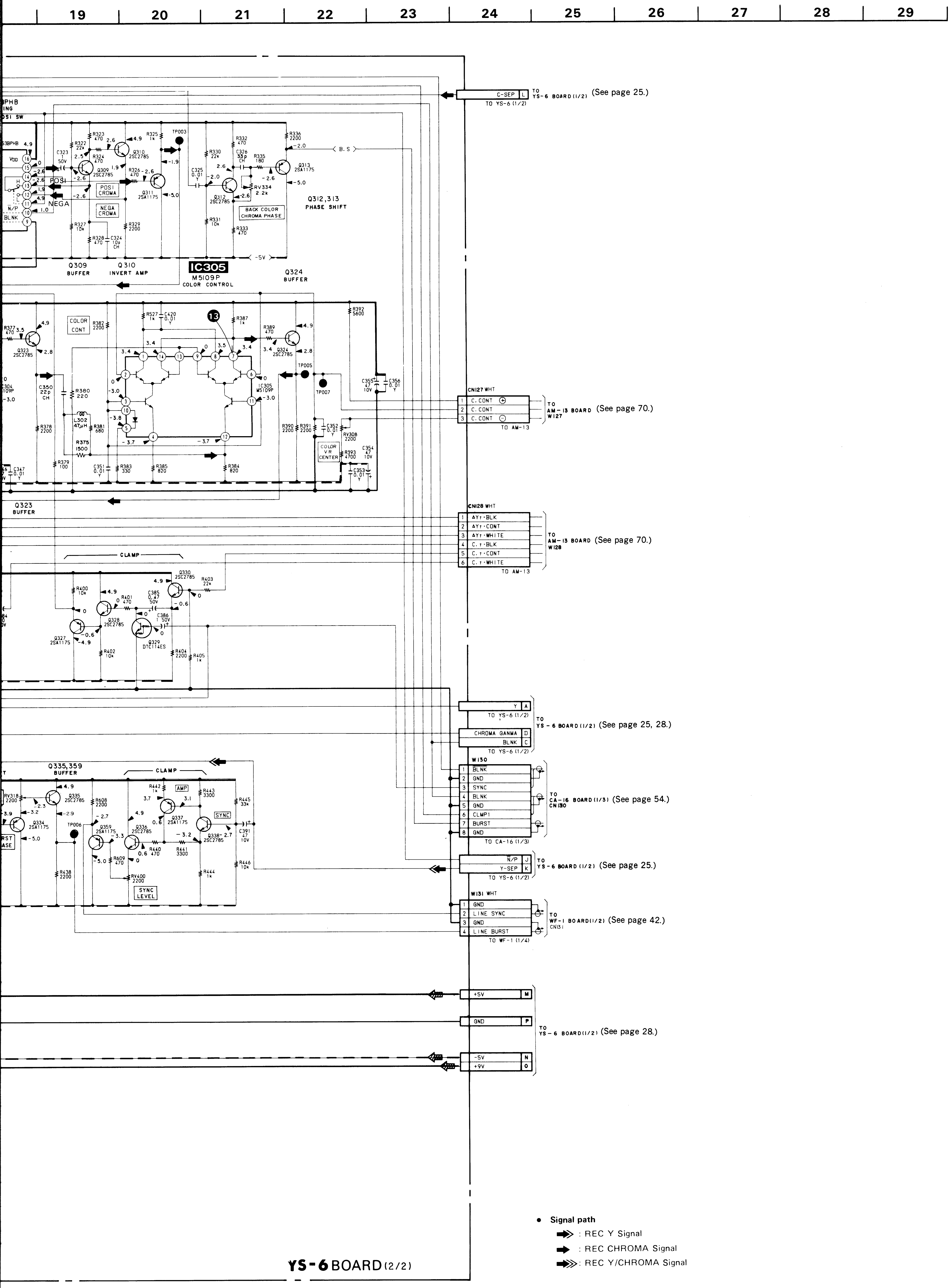
(See page 39.)

(See page 28.)

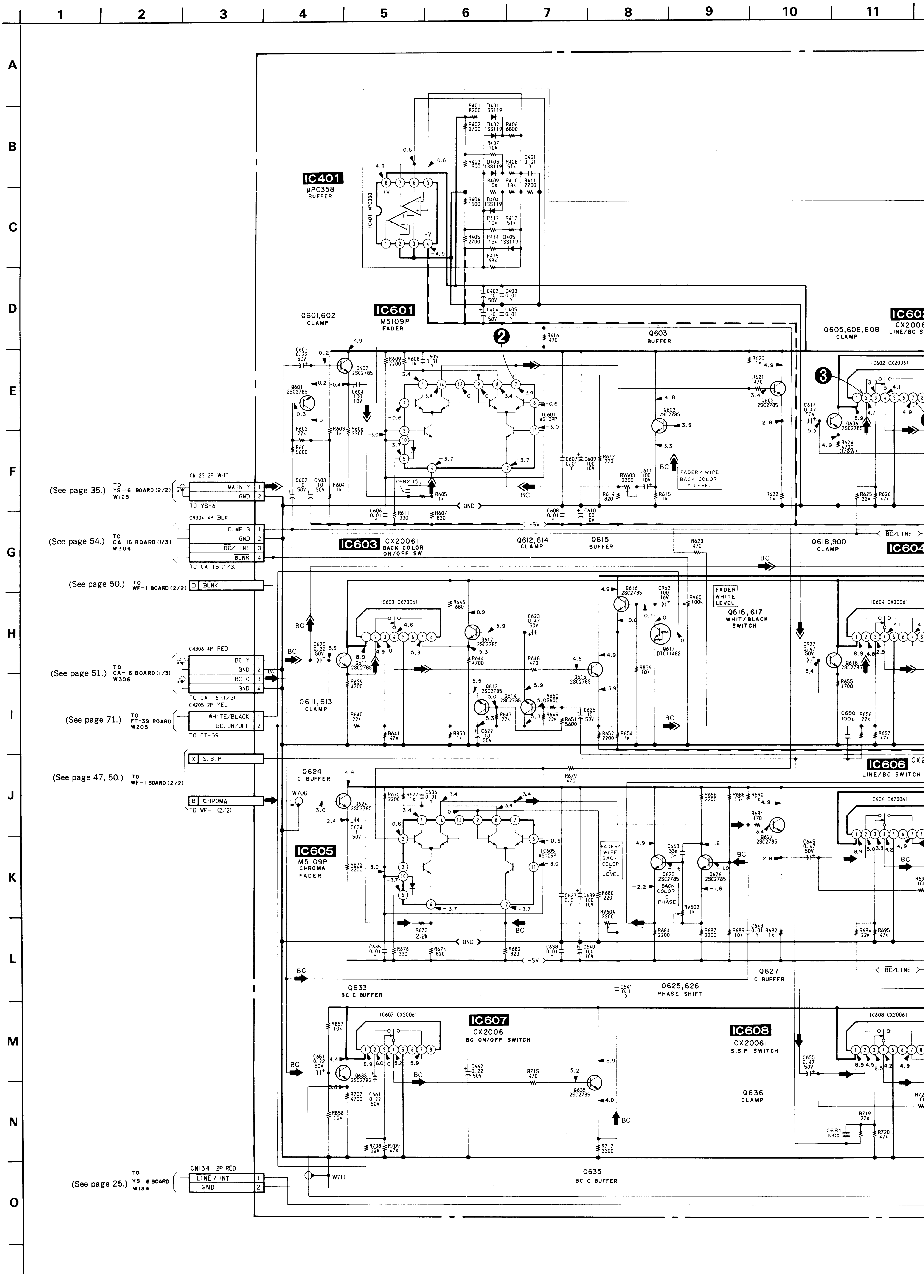
(See page 47.)

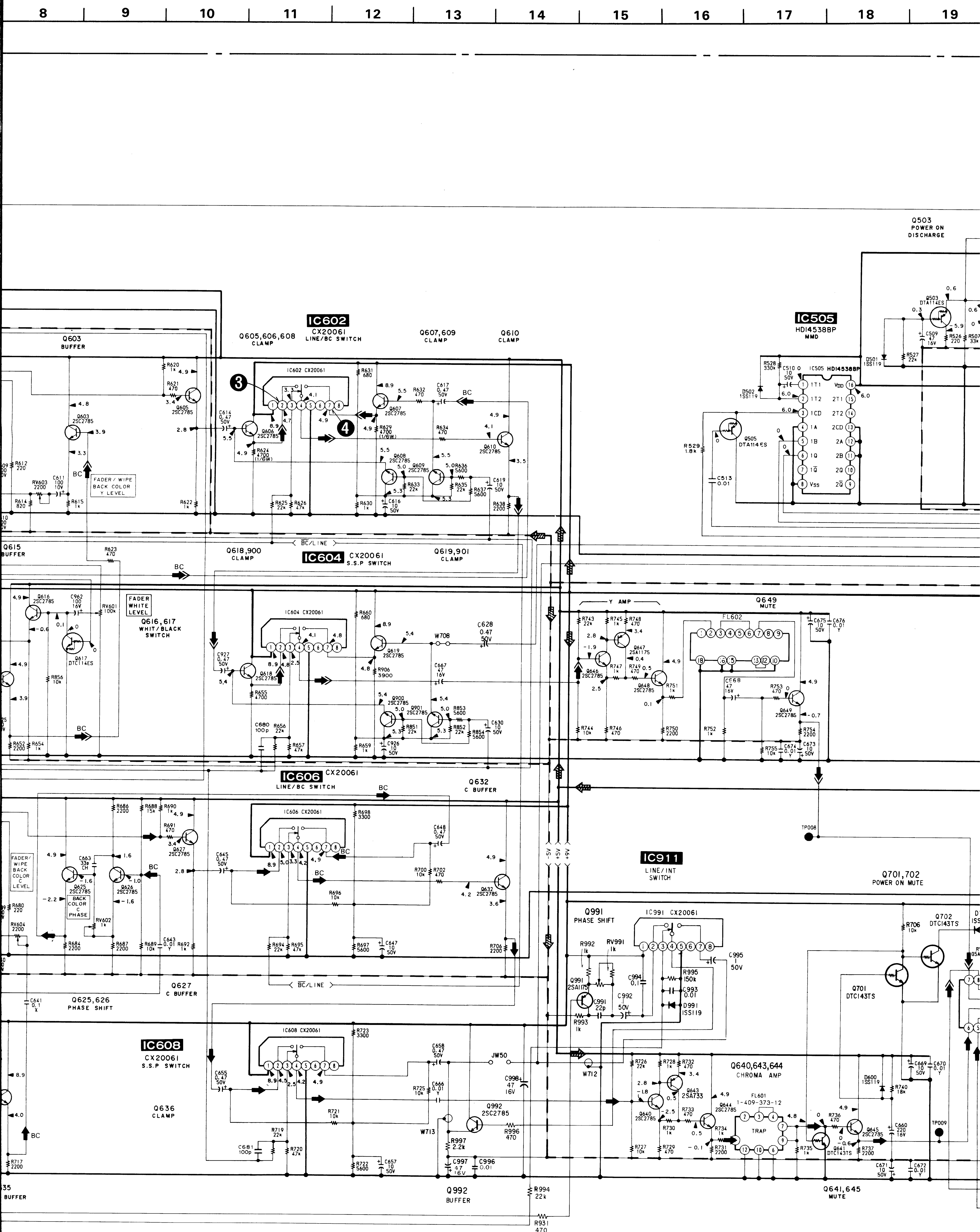


7
8
9
10
11
12
13
14
15
16
17
18
Q376 Y BUFFER
Q378 CLAMP
IC303 TC4053BPHB NEGA/POSI SW NEGA Y BLANKING
Q375,304 LINEAR CLIP
Q307,308 CHROMA INVERT AMP
IC302 TC4053BPHB BLANKING NEGA POSI SW
PILOT SIGNAL
POSI
NEGA
TP002
TP001
Y-SEP
+5V
-5V
GND
BLNK
N/P
SYNC
CLMP
BURST
Y-7 CENTER
IC304 M5109P CHROMA GAMMA CONTROL
Q323 BUFFER
Q371,372 INVERT
IC309 TL026C GAIN CONTROL AMP
Q379,370 CLAMP
Q374 BUFFER
Q380 CLAMP
Q325 C-Y BUFFER
Q326 DIFERENTIAL OUTPUT
TP004
IC308 μPC324C AGC AMP
HUE CONTROL
Q333,334 PHASE SHIFT
BURST LEVEL
BURST PHASE
HUE CENTER
Y INVERT AMP
PHASE CONT
Y LEVEL
TP020
Q347-349 COLOR CORRECT CHROMA MIX
Q350,352 CHROMA AMP
Q353-355 LIMITER
CHROMA LIMITER
CHROMA LEVEL
Q356,357 CHROMA AMP
TP008
+9V

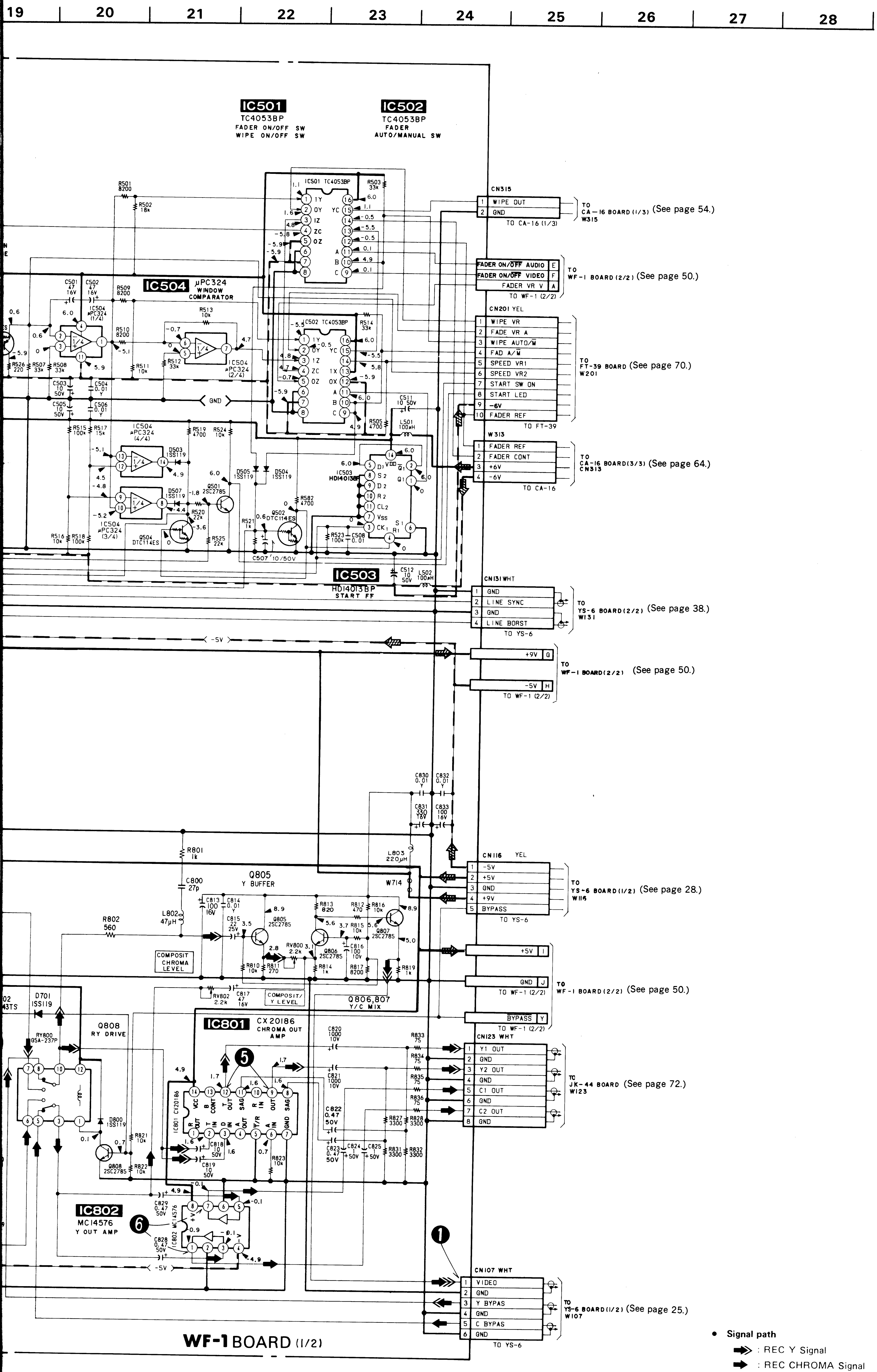

19
20
21
22
23
24
25
26
27
28
29
C-SEP L
TO YS-6 (1/2)
TO YS-6 BOARD (1/2) (See page 25.)
IC305
M5109P
COLOR CONTROL
Q309 BUFFER
Q310 INVERT AMP
Q324 BUFFER
Q312,313 PHASE SHIFT
POSI CROMA
NEGA CROMA
BACK COLOR CHROMA PHASE
B.S
COLOR CONT
COLOR V.R CENTER
Q323 BUFFER
CN127 WHT
1 C.CONT ⊕
2 C.CONT
3 C.CONT ⊖
TO AM-13
TO AM-13 BOARD W127 (See page 70.)
CN128 WHT
1 ΔYr·BLK
2 ΔYr·CONT
3 ΔYr·WHITE
4 C.r·BLK
5 C.r·CONT
6 C.r·WHITE
TO AM-13
TO AM-13 BOARD W128 (See page 70.)
CLAMP
Y A
TO YS-6 (1/2)
CHROMA GANMA D
BLNK C
TO YS-6 (1/2)
TO YS-6 BOARD (1/2) (See page 25, 28.)
W130
1 BLNK
2 GND
3 SYNC
4 BLNK
5 GND
6 CLMP1
7 BURST
8 GND
TO CA-16 (1/3)
TO CA-16 BOARD (1/3) CN130 (See page 54.)
N/P J
Y-SEP K
TO YS-6 (1/2)
TO YS-6 BOARD (1/2) (See page 25.)
W131 WHT
1 GND
2 LINE SYNC
3 GND
4 LINE BURST
TO WF-1 (1/4)
TO WF-1 BOARD (1/2) CN131 (See page 42.)
Q335,359 BUFFER
AMP
SYNC
SYNC LEVEL
+5V M
GND P
-5V N
+9V O
TO YS-6 BOARD (1/2) (See page 28.)
YS-6 BOARD (2/2)
Signal path
: REC Y Signal
: REC CHROMA Signal
: REC Y/CHROMA Signal

WF-1 (Y/C COLOR CONTROL) SCHEMATIC DIAGRAM
—Ref. No. WF-1 BOARD : 2000 series—


1
2
3
4
5
6
7
8
9
10
11
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
IC401
μPC358
BUFFER
IC601
M5109P
FADER
Q601,602
CLAMP
Q603
BUFFER
Q605,606,608
CLAMP
IC603
CX20061
BACK COLOR ON/OFF SW
Q612,614
CLAMP
Q615
BUFFER
Q618,900
CLAMP
Q616,617
WHIT/BLACK SWITCH
FADER WHITE LEVEL
FADER / WIPE BACK COLOR Y LEVEL
Q611,613
CLAMP
Q624
C BUFFER
IC605
M5109P
CHROMA FADER
IC606
LINE/BC SWITCH
FADER/ WIPE BACK COLOR C LEVEL
BACK COLOR C PHASE
Q627
C BUFFER
Q625,626
PHASE SHIFT
Q633
BC C BUFFER
IC607
CX20061
BC ON/OFF SWITCH
IC608
CX20061
S.S.P SWITCH
Q636
CLAMP
Q635
BC C BUFFER
(See page 35.)
TO YS-6 BOARD (2/2) W125
CN125 2P WHT
MAIN Y
GND
TO YS-6
(See page 54.)
TO CA-16 BOARD (1/3) W304
CN304 4P BLK
CLMP
GND
BC/LINE
BLNK
TO CA-16 (1/3)
(See page 50.)
TO WF-1 BOARD (2/2)
BLNK
(See page 51.)
TO CA-16 BOARD (1/3) W306
CN306 4P RED
BC Y
GND
BC C
GND
TO CA-16 (1/3)
(See page 71.)
TO FT-39 BOARD W205
CN205 2P YEL
WHITE/BLACK
BC. ON/OFF
TO FT-39
(See page 47, 50.)
TO WF-1 BOARD (2/2)
S.S.P
CHROMA
TO WF-1 (2/2)
(See page 25.)
TO YS-6 BOARD W134
CN134 2P RED
LINE / INT
GND
W706
W711
GND
-5V
BC
BC/LINE



8
9
10
11
12
13
14
15
16
17
18
19
IC602
CX20061
LINE/BC SWITCH
Q605,606,608
CLAMP
Q607,609
CLAMP
Q610
CLAMP
Q603
BUFFER
FADER / WIPE
BACK COLOR
Y LEVEL
IC505
HD14538BP
MMD
Q503
POWER ON
DISCHARGE
Q505
DTA114ES
Q615
BUFFER
Q618,900
CLAMP
IC604
CX20061
S.S.P SWITCH
Q619,901
CLAMP
FADER
WHITE
LEVEL
Q616,617
WHIT/BLACK
SWITCH
BC/LINE
Y AMP
Q649
MUTE
FL602
W708
IC606
CX20061
LINE/BC SWITCH
Q632
C BUFFER
FADER/
WIPE
BACK
COLOR
C
LEVEL
BACK
COLOR
C
PHASE
Q627
C BUFFER
Q625,626
PHASE SHIFT
TP008
IC911
LINE/INT
SWITCH
Q701,702
POWER ON MUTE
Q991
PHASE SHIFT
IC991 CX20061
Q701
DTC143TS
Q702
DTC143TS
-5V
+5V
+9V
IC608
CX20061
S.S.P SWITCH
Q636
CLAMP
JW50
W712
W713
Q640,643,644
CHROMA AMP
FL601
1-409-373-12
TRAP
TP009
Q992
2SC2785
Q992
BUFFER
Q641,645
MUTE
35
BUFFER
R994
22k
R931
470


19
20
21
22
23
24
25
26
27
28
IC501
TC4053BP
FADER ON/OFF SW
WIPE ON/OFF SW
IC502
TC4053BP
FADER
AUTO/MANUAL SW
IC504
μPC324
WINDOW
COMPARATOR
IC503
HD14013BP
START FF
CN315
1 WIPE OUT
2 GND
TO CA-16 (1/3)
TO CA-16 BOARD (1/3) (See page 54.)
W315
FADER ON/OFF AUDIO E
FADER ON/OFF VIDEO F
FADER VR V A
TO WF-1 (2/2)
TO WF-1 BOARD (2/2) (See page 50.)
CN201 YEL
1 WIPE VR
2 FADE VR A
3 WIPE AUTO/M
4 FAD A/M
5 SPEED VR1
6 SPEED VR2
7 START SW ON
8 START LED
9 -6V
10 FADER REF
TO FT-39
TO FT-39 BOARD (See page 70.)
W201
W313
1 FADER REF
2 FADER CONT
3 +6V
4 -6V
TO CA-16
TO CA-16 BOARD (3/3) (See page 64.)
CN313
CN131 WHT
1 GND
2 LINE SYNC
3 GND
4 LINE BORST
TO YS-6
TO YS-6 BOARD (2/2) (See page 38.)
W131
+9V G
-5V H
TO WF-1 (2/2)
TO WF-1 BOARD (2/2) (See page 50.)
GND
-5V
CN116 YEL
1 -5V
2 +5V
3 GND
4 +9V
5 BYPASS
TO YS-6
TO YS-6 BOARD (1/2) (See page 28.)
W116
+5V I
GND J
TO WF-1 (2/2)
TO WF-1 BOARD (2/2) (See page 50.)
BYPASS Y
TO WF-1 (2/2)
CN123 WHT
1 Y1 OUT
2 GND
3 Y2 OUT
4 GND
5 C1 OUT
6 GND
7 C2 OUT
8 GND
TO JK-44 BOARD (See page 72.)
W123
CN107 WHT
1 VIDEO
2 GND
3 Y BYPAS
4 GND
5 C BYPAS
6 GND
TO YS-6
TO YS-6 BOARD (1/2) (See page 25.)
W107
Q805
Y BUFFER
Q806,807
Y/C MIX
COMPOSIT CHROMA LEVEL
COMPOSIT/ Y LEVEL
Q808
RY DRIVE
RY800
G5A-237P
D701
1SS119
IC801
CX20186
CHROMA OUT AMP
IC802
MC14576
Y OUT AMP
R801 1k
C800 27p
L802 47μH
R802 560
L803 220μH
W714
Q501 2SC2785
Q502 DTC114ES
Q504 DTC114ES
D503 1SS119
D504 1SS119
D505 1SS119
D507 1SS119
C507 10/50V
C512 10 50V
L502 100μH
L501 100μH
C511 10 50V
❶
❺
❻

WF-1 BOARD (1/2)

- **Signal path**

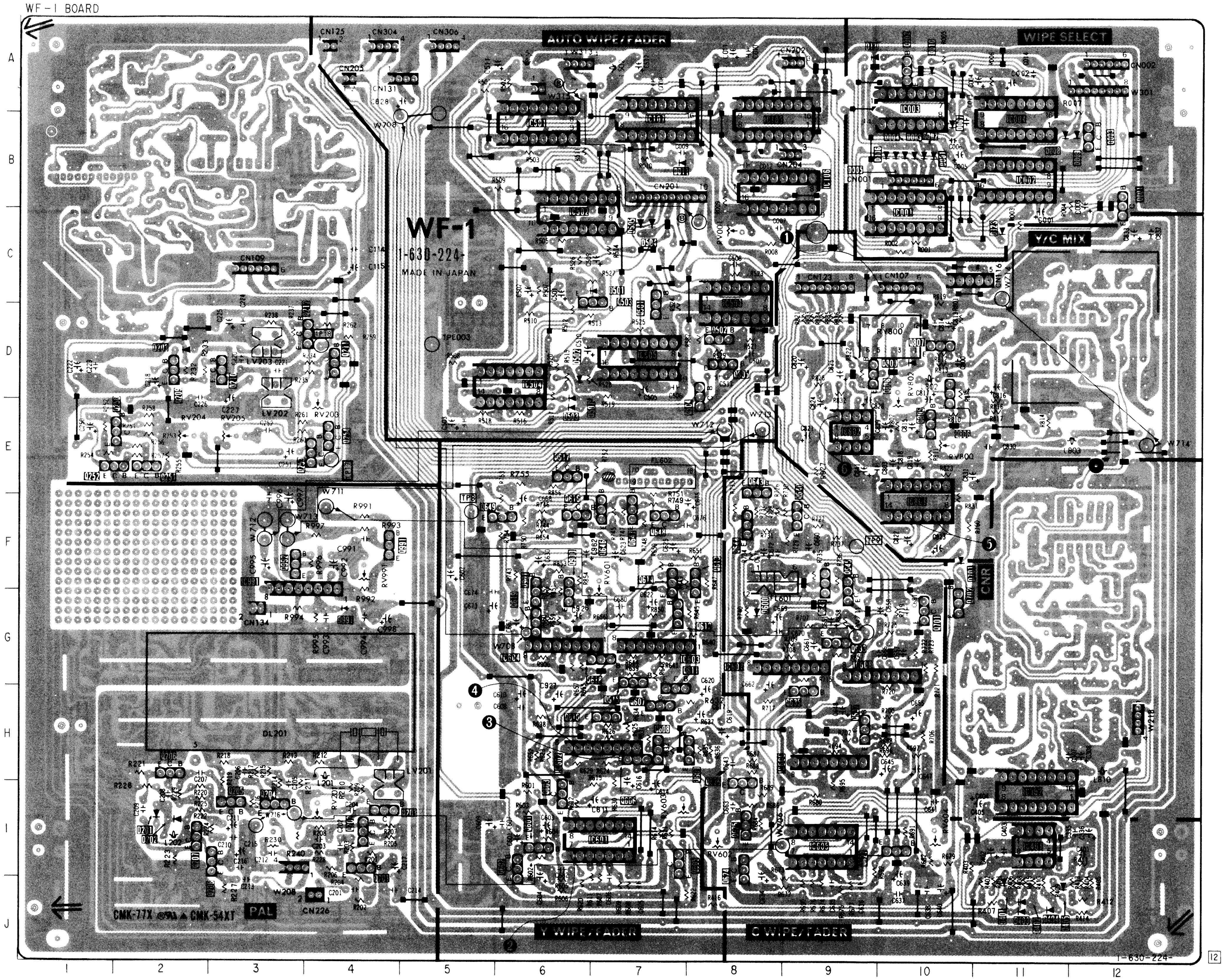
➡ : REC Y Signal

➡ : REC CHROMA Signal

➡ : REC Y/CHROMA Signal

WF-1 (Y/C COLOR CONTROL) PRINTED WIRING BOARD

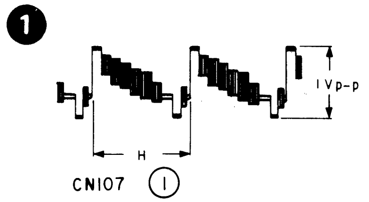
—Ref. No. WF-1 BOARD : 2000 series—


WF-I BOARD
CN125
CN304
CN306
CN205
CN131
AUTO WIPE/FADER
WIPE SELECT
CN202
CN002
CN201
CN204
CN001
Y/C MIX
WF-1
1-630-224-
MADE IN JAPAN
CN109
CN123
CN107
LV203
LV202
RV204
RV205
RV203
FL602
CN134
CNR
DL201
LV201
CMK-77X
CMK-54XT
PAL
CN226
Y WIPE/FADER
C WIPE/FADER
1-630-224-
A
B
C
D
E
F
G
H
I
J
1
2
3
4
5
6
7
8
9
10
11
12

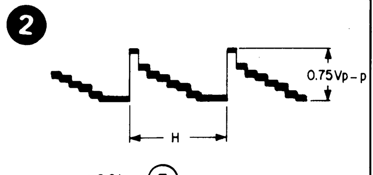
WF-1 BOARD

D001	B-10
D002	B-10
D003	B-10
D004	B-10
D005	B-10
D006	B-9
D007	A-10
D008	B-11
D009	B-11
D010	A-10
D011	B-7
D123	C-11
D130	A-9
D201	I-2
D202	I-2
D203	D-2
D401	J-11
D402	J-11
D403	J-11
D404	J-11
D405	J-11
D501	C-6
D502	D-6
D503	E-6
D504	C-7
D505	C-7
D507	E-6
D600	G-8
D701	F-10
D800	D-10
D991	G-4
IC001	B-10
IC002	B-11
IC003	A-10
IC004	A-11
IC105	A-8
IC106	B-9
IC107	A-7
IC302	I-11
IC401	I-11
IC501	B-6
IC502	B-6
IC503	C-8
IC504	D-6
IC505	D-7
IC601	I-7
IC602	H-6
IC603	G-7
IC604	Q-6
IC605	I-9
IC606	H-9
IC607	G-8
IC608	G-9
IC801	E-10
IC802	E-9
IC991	F-3
Q001	B-12
Q002	A-10
Q003	B-12
Q201	I-4
Q202	I-4
Q203	I-4
Q204	I-3
Q205	I-3
Q206	H-2
Q207	I-2
Q208	I-2
Q209	D-2
Q210	D-3
Q211	D-4
Q212	D-4
Q250	E-1
Q251	E-2
Q252	E-1
Q253	E-4
Q254	E-4
Q501	C-7
Q502	D-8
Q503	C-6
Q504	D-8
Q505	D-8
Q601	I-6
Q602	I-6
Q603	I-6
Q605	I-7
Q606	H-7
Q607	H-7
Q608	H-7
Q609	H-7
Q610	H-7
Q611	G-7
Q612	G-7
Q613	F-7
Q614	F-7
Q615	G-7
Q616	F-6
Q617	E-6
Q618	G-6
Q619	G-6
Q624	I-8
Q625	I-8
Q626	H-8
Q627	I-10
Q632	H-9
Q633	G-9
Q635	H-9
Q640	F-19
Q641	F-9
Q643	E-8
Q644	F-8
Q645	F-9
Q646	F-7
Q647	F-7
Q648	F-7
Q649	F-5
Q701	G-10
Q702	G-10
Q805	E-10
Q806	D-10
Q807	D-10
Q808	D-9
Q900	F-6
Q901	F-6
Q991	F-4
Q992	F-3

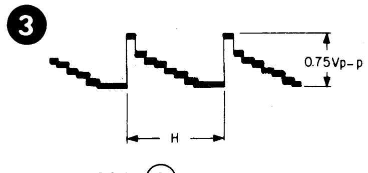
WF-1 BOARD



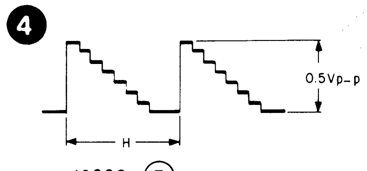
CN107 ①



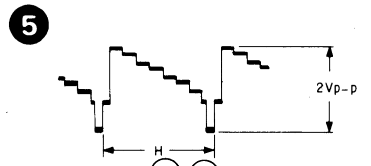
IC601 ⑦



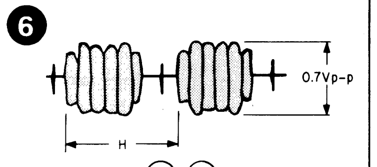
IC602 ②



IC602 ⑦

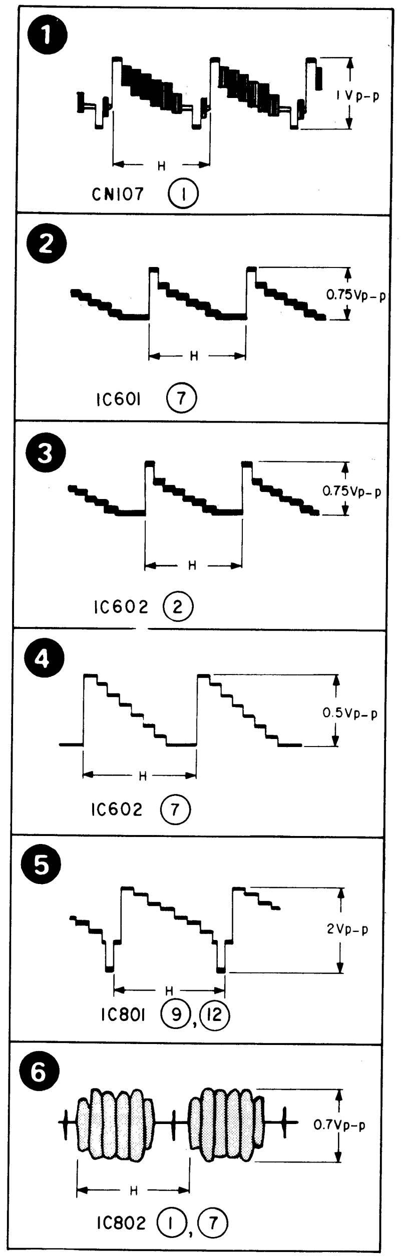


IC801 ⑨,⑫



IC802 ①,⑦

WF-1 BOARD

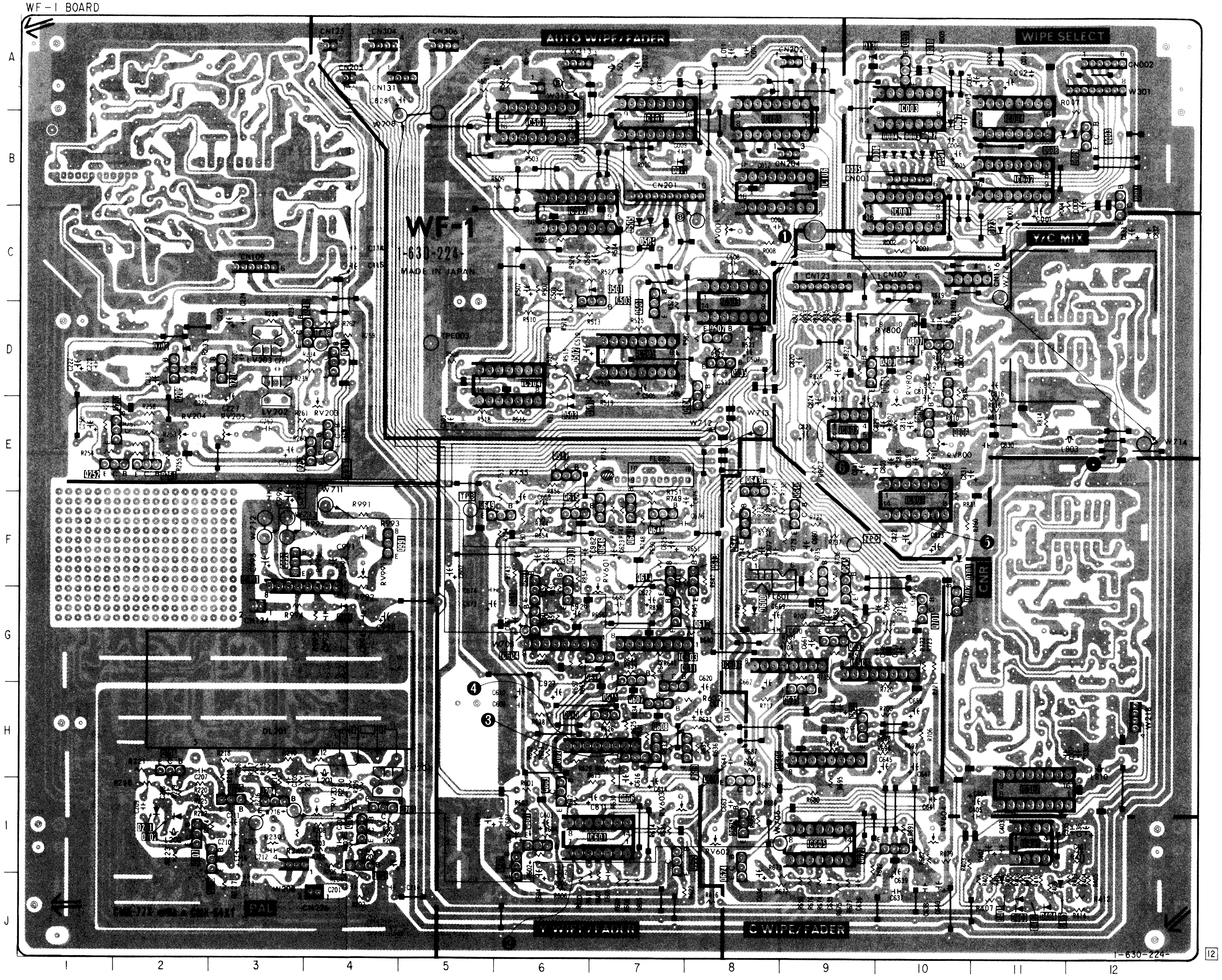


WF-1 BOARD

D001	B-10
D002	B-10
D003	B-10
D004	B-10
D005	B-10
D006	B-9
D007	A-10
D008	B-11
D009	B-11
D010	A-10
D011	B-7
D123	C-11
D130	A-9
D201	I-2
D202	I-2
D203	D-2
D401	J-11
D402	J-11
D403	J-11
D404	J-11
D405	J-11
D501	C-6
D502	D-6
D503	E-6
D504	C-7
D505	C-7
D507	E-6
D600	G-8
D701	F-10
D800	D-10
D991	G-4
IC001	B-10
IC002	B-11
IC003	A-10
IC004	A-11
IC105	A-8
IC106	B-9
IC107	A-7
IC302	I-11
IC401	I-11
IC501	B-6
IC502	B-6
IC503	C-8
IC504	D-6
IC505	D-7
IC601	I-7
IC602	H-6
IC603	G-7
IC604	Q-6
IC605	I-9
IC606	H-9
IC607	G-8
IC608	G-9
IC801	E-10
IC802	E-9
IC991	F-3
Q001	B-12
Q002	A-10
Q003	B-12
Q201	I-4
Q202	I-4
Q203	I-4
Q204	I-3
Q205	I-3
Q206	H-2
Q207	I-2
Q208	I-2
Q209	D-2
Q210	D-3
Q211	D-4
Q212	D-4
Q250	E-1
Q251	E-2
Q252	E-1
Q253	E-4
Q254	E-4
Q501	C-7
Q502	D-8
Q503	C-6
Q504	D-8
Q505	D-8
Q601	I-6
Q602	I-6
Q603	I-6
Q605	I-7
Q606	H-7
Q607	H-7
Q608	H-7
Q609	H-7
Q610	H-7
Q611	G-7
Q612	G-7
Q613	F-7
Q614	F-7
Q615	G-7
Q616	F-6
Q617	E-6
Q618	G-6
Q619	G-6
Q624	I-8
Q625	I-8
Q626	H-8
Q627	I-10
Q632	H-9
Q633	G-9
Q635	H-9
Q640	F-19
Q641	F-9
Q643	E-8
Q644	F-8
Q645	F-9
Q646	F-7
Q647	F-7
Q648	F-7
Q649	F-5
Q701	G-10
Q702	G-10
Q805	E-10
Q806	D-10
Q807	D-10
Q808	D-9
Q900	F-6
Q901	F-6
Q991	F-4
Q992	F-3

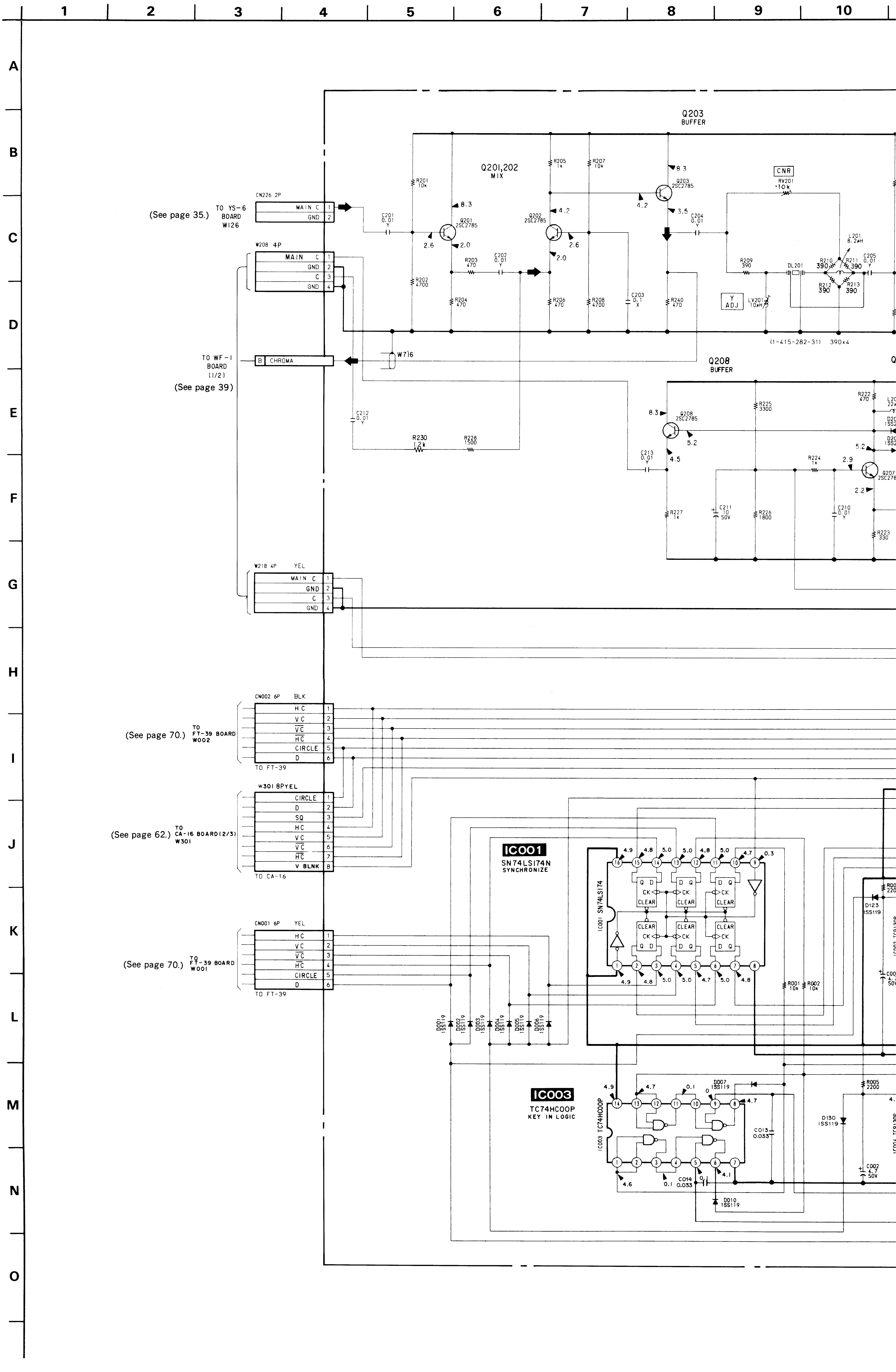
WF-1 (Y/C COLOR CONTROL) PRINTED WIRING BOARD

—Ref. No. WF-1 BOARD : 2000 series—

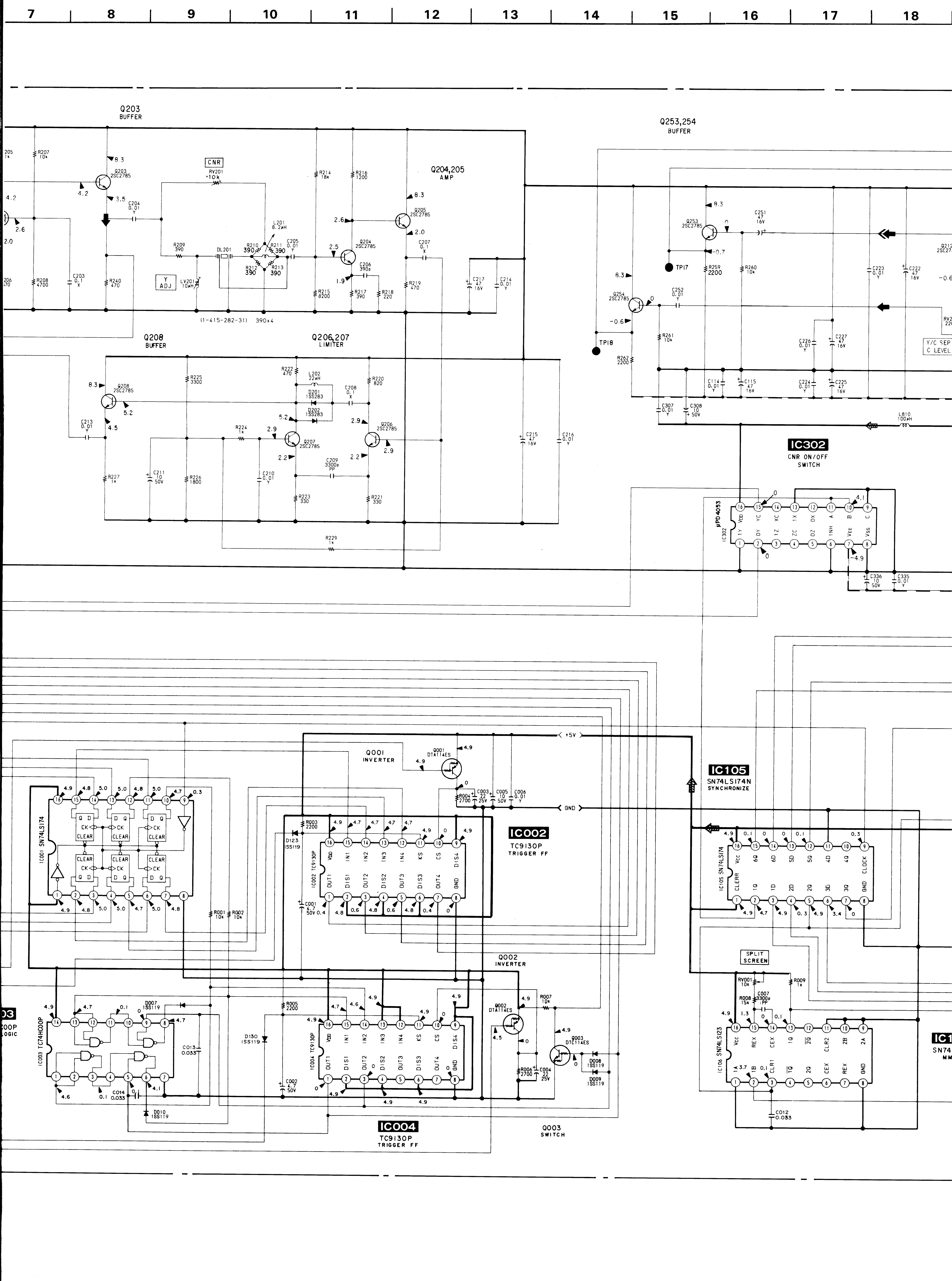

WF-1 BOARD
AUTO WIPE/FADER
WIPE SELECT
Y/C MIX
CNR
Y WIPE/FADER
C WIPE/FADER
WF-1
1-630-224-
MADE IN JAPAN
A
B
C
D
E
F
G
H
I
J
1
2
3
4
5
6
7
8
9
10
11
12
1-630-224-
12
❶
❷
❸
❹
❺
❻

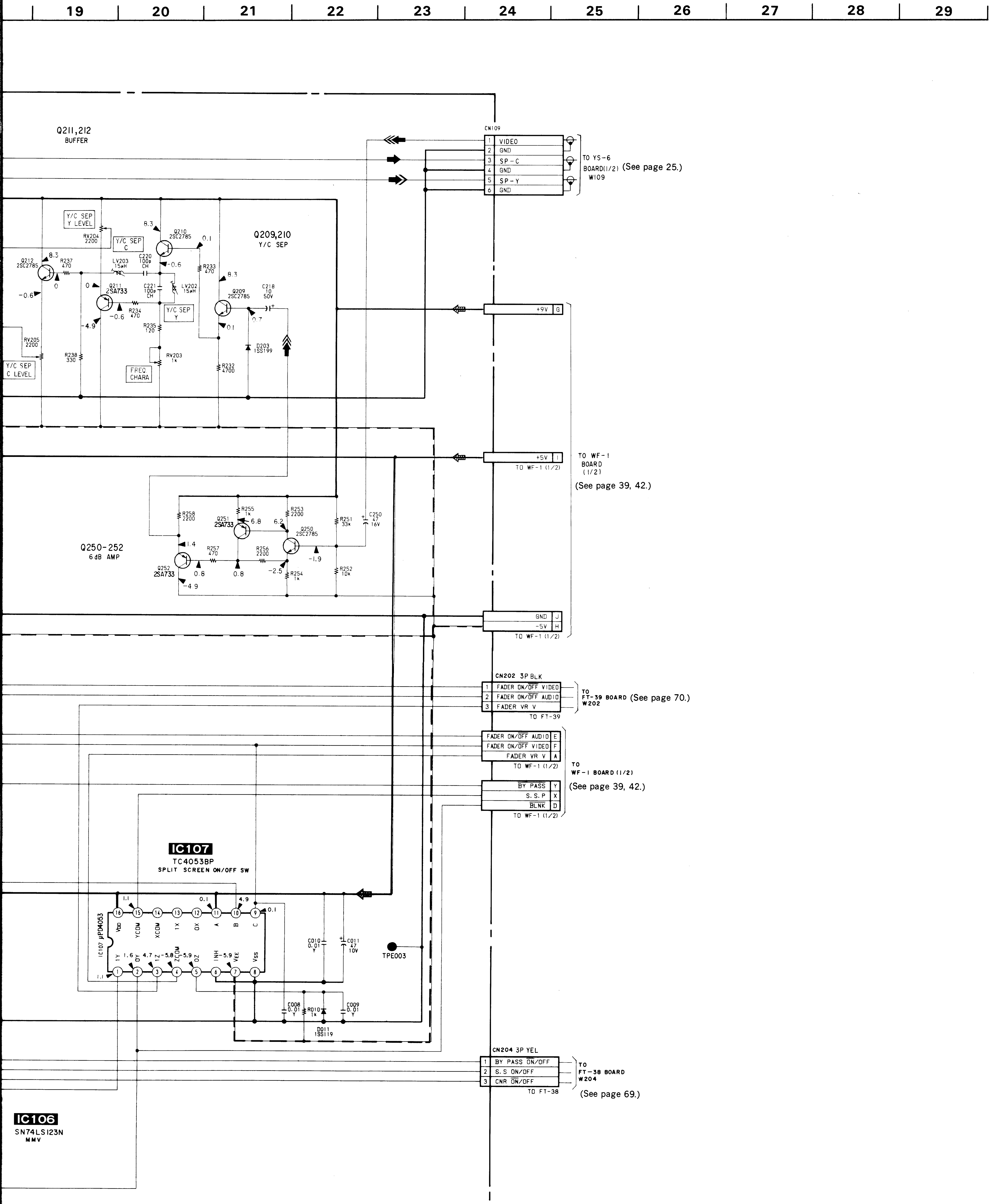
WF-1 (Y/C COLOR CONTROL) SCHEMATIC DIAGRAM

—Ref. No. WF-1 BOARD : 2000 series—



1 2 3 4 5 6 7 8 9 10
A B C D E F G H I J K L M N O
Q203
BUFFER
Q201,202
MIX
Q208
BUFFER
CNR
RV201
10k
Y ADJ
LV201
10μH
L201
8.2μH
DL201
(1-415-282-31) 390×4
(See page 35.)
TO YS-6 BOARD W126
CN226 2P
MAIN C
GND
W208 4P
MAIN C
GND
C
GND
TO WF-1 BOARD (1/2)
(See page 39)
B CHROMA
W716
W218 4P YEL
MAIN C
GND
C
GND
CN002 6P BLK
HC
VC
VC
HC
CIRCLE
D
(See page 70.)
TO FT-39 BOARD W002
TO FT-39
W301 8PYEL
CIRCLE
D
SQ
HC
VC
VC
HC
V BLNK
(See page 62.)
TO CA-16 BOARD(2/3) W301
TO CA-16
CN001 6P YEL
HC
VC
VC
HC
CIRCLE
D
(See page 70.)
TO FT-39 BOARD W001
TO FT-39
Q201 2SC2785
Q202 2SC2785
Q203 2SC2785
Q208 2SC2785
Q207 2SC2785
R201 10k
R202 4700
R203 470
R204 470
R205 1k
R206 470
R207 10k
R208 4700
R209 390
R210 390
R211 390
R212 390
R213 390
R240 470
R222 470
R223 330
R224 1k
R225 3300
R226 1800
R227 1k
R228 1500
R230 1.2k
C201 0.01 Y
C202 0.01 Y
C203 0.1 X
C204 0.01 Y
C205 0.01 Y
C210 0.01 Y
C211 10 50V
C212 0.01 Y
C213 0.01 Y
8.3
2.6
2.0
4.2
3.5
5.2
4.5
2.9
2.2
IC001
SN74LS174N
SYNCHRONIZE
IC001 SN74LS174
Q D
CK
CLEAR
IC003
TC74HC00P
KEY IN LOGIC
IC003 TC74HC00P
D001 1SS119
D002 1SS119
D003 1SS119
D004 1SS119
D005 1SS119
D006 1SS119
D007 1SS119
D010 1SS119
D123 1SS119
D130 1SS119
R001 10k
R002 10k
R005 2200
C013 0.033
C014 0.033
C002 4.7 50V
4.9
4.8
5.0
4.7
0.3
0.1
4.6
4.1


7
8
9
10
11
12
13
14
15
16
17
18
Q203
BUFFER
Q203 2SC2785
CNR
RV201 10k
Y ADJ
LV201 10μH
DL201
L201 8.2μH
(1-415-282-31) 390×4
Q204,205
AMP
Q205 2SC2785
Q204 2SC2785
Q208
BUFFER
Q208 2SC2785
Q206,207
LIMITER
L202 22μH
D201 1SS283
D202 1SS283
Q207 2SC2785
Q206 2SC2785
R229 1k
Q253,254
BUFFER
Q253 2SC2785
Q254 2SC2785
TP17
TP18
Y/C SEP C LEVEL
L810 100μH
IC302
CNR ON/OFF SWITCH
μPD4053
IC001 SN74LS174
IC003 TC74HC00P
Q001
INVERTER
Q001 DTA114ES
+5V
GND
IC002
TC9130P
TRIGGER FF
D123 1SS119
IC004
TC9130P
TRIGGER FF
Q002
INVERTER
Q002 DTA114ES
Q003 DTC114ES
Q003
SWITCH
D130 1SS119
D007 1SS119
D010 1SS119
D008 1SS119
D009 1SS119
IC105
SN74LS174N
SYNCHRONIZE
IC105 SN74LS174
SPLIT SCREEN
RV001 10k
IC106 SN74LS123


19
20
21
22
23
24
25
26
27
28
29
Q211,212
BUFFER
CN109
1 VIDEO
2 GND
3 SP-C
4 GND
5 SP-Y
6 GND
TO YS-6 BOARD(1/2) (See page 25.)
W109
Y/C SEP Y LEVEL
RV204 2200
Y/C SEP C
Q210 2SC2785
Q209,210
Y/C SEP
Q212 2SC2785
R237 470
LV203 15μH
C220 100p CH
R233 470
Q211 2SA733
C221 100p CH
LV202 15μH
Q209 2SC2785
C218 10 50V
R234 470
Y/C SEP Y
R235 120
RV205 2200
R238 330
RV203 1k
D203 1SS199
Y/C SEP C LEVEL
FREQ CHARA
R232 4700
+9V G
+5V I
TO WF-1 (1/2)
TO WF-1 BOARD (1/2)
(See page 39, 42.)
R258 2200
R255 1k
Q251 2SA733
R253 2200
Q250 2SC2785
R251 33k
C250 47 16V
Q250-252
6dB AMP
R257 470
R256 2200
Q252 2SA733
R254 1k
R252 10k
GND J
-5V H
TO WF-1 (1/2)
CN202 3P BLK
1 FADER ON/OFF VIDEO
2 FADER ON/OFF AUDIO
3 FADER VR V
TO FT-39
TO FT-39 BOARD (See page 70.)
W202
FADER ON/OFF AUDIO E
FADER ON/OFF VIDEO F
FADER VR V A
TO WF-1 (1/2)
TO WF-1 BOARD (1/2)
(See page 39, 42.)
BY PASS Y
S.S.P X
BLNK D
TO WF-1 (1/2)
IC107
TC4053BP
SPLIT SCREEN ON/OFF SW
IC107 μPD4053
VDD YCOM XCOM 1X 0X A B C
1Y 0Y 1Z ZCOM 0Z INH VEE VSS
C010 0.01 Y
C011 47 10V
TPE003
C008 0.01 Y
R010 1k
C009 0.01 Y
D011 1SS119
CN204 3P YEL
1 BY PASS ON/OFF
2 S.S ON/OFF
3 CNR ON/OFF
TO FT-38
TO FT-38 BOARD
W204
(See page 69.)
IC106
SN74LS123N
MMV
WF-1 BOARD (2/2)

- **Signal path**

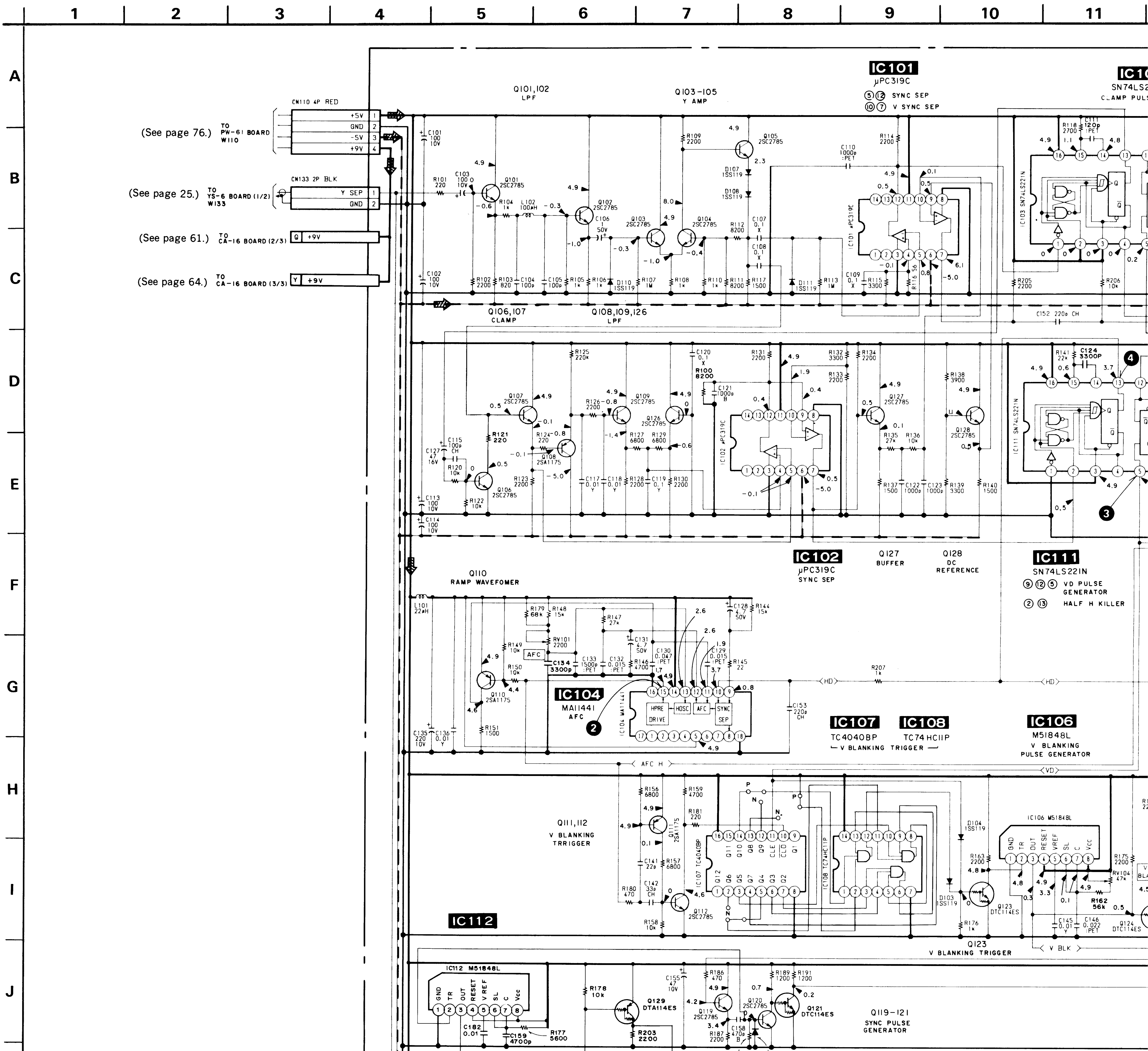
⇛ : REC Y Signal

➡ : REC CHROMA Signal

⇛⇛ : REC Y/CHROMA Signal

CA-16 (BACK COLOR/AUDIO) SCHEMATIC DIAGRAM

—Ref. No. CA-16 BOARD : 3000 series—


1
2
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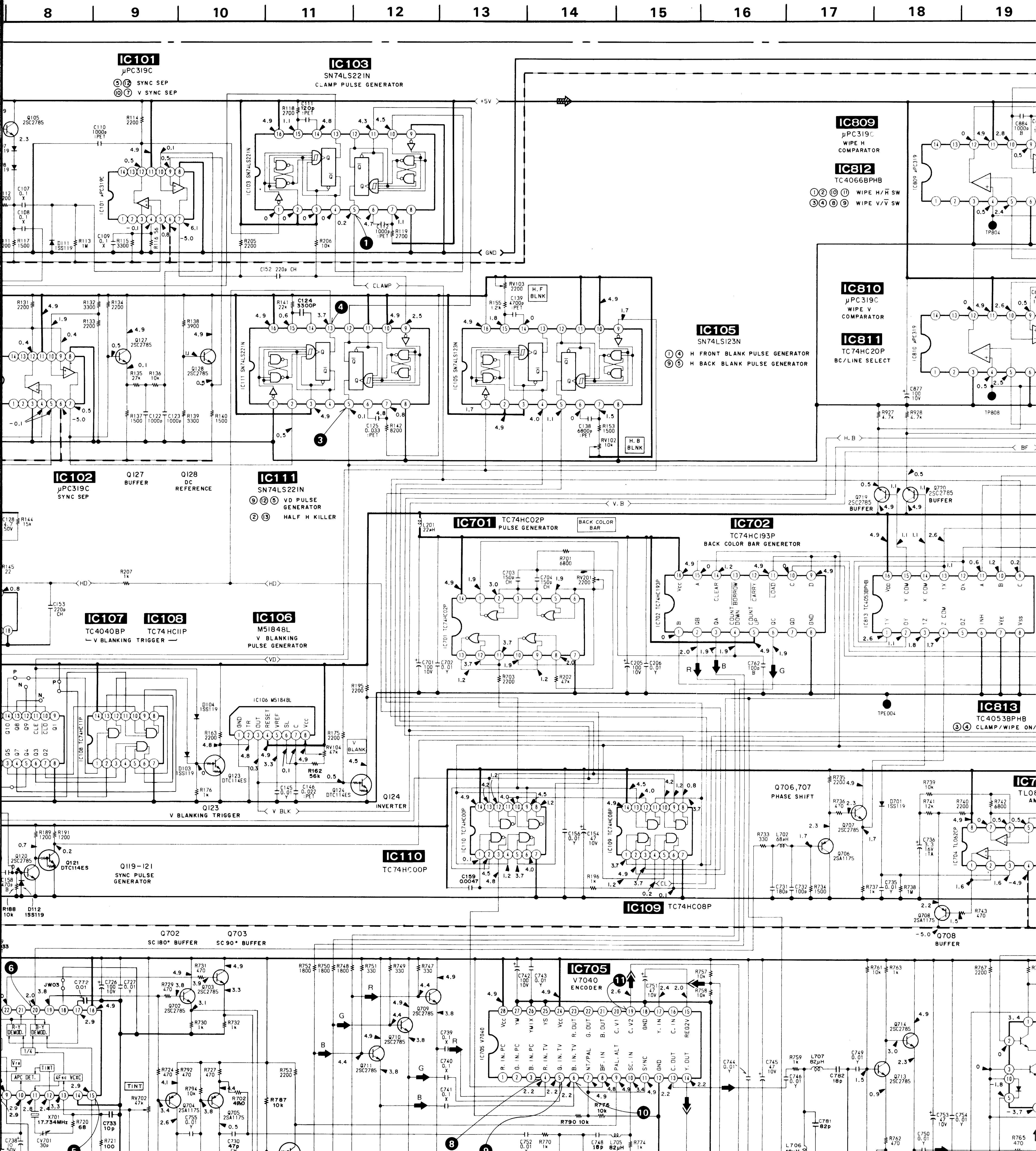
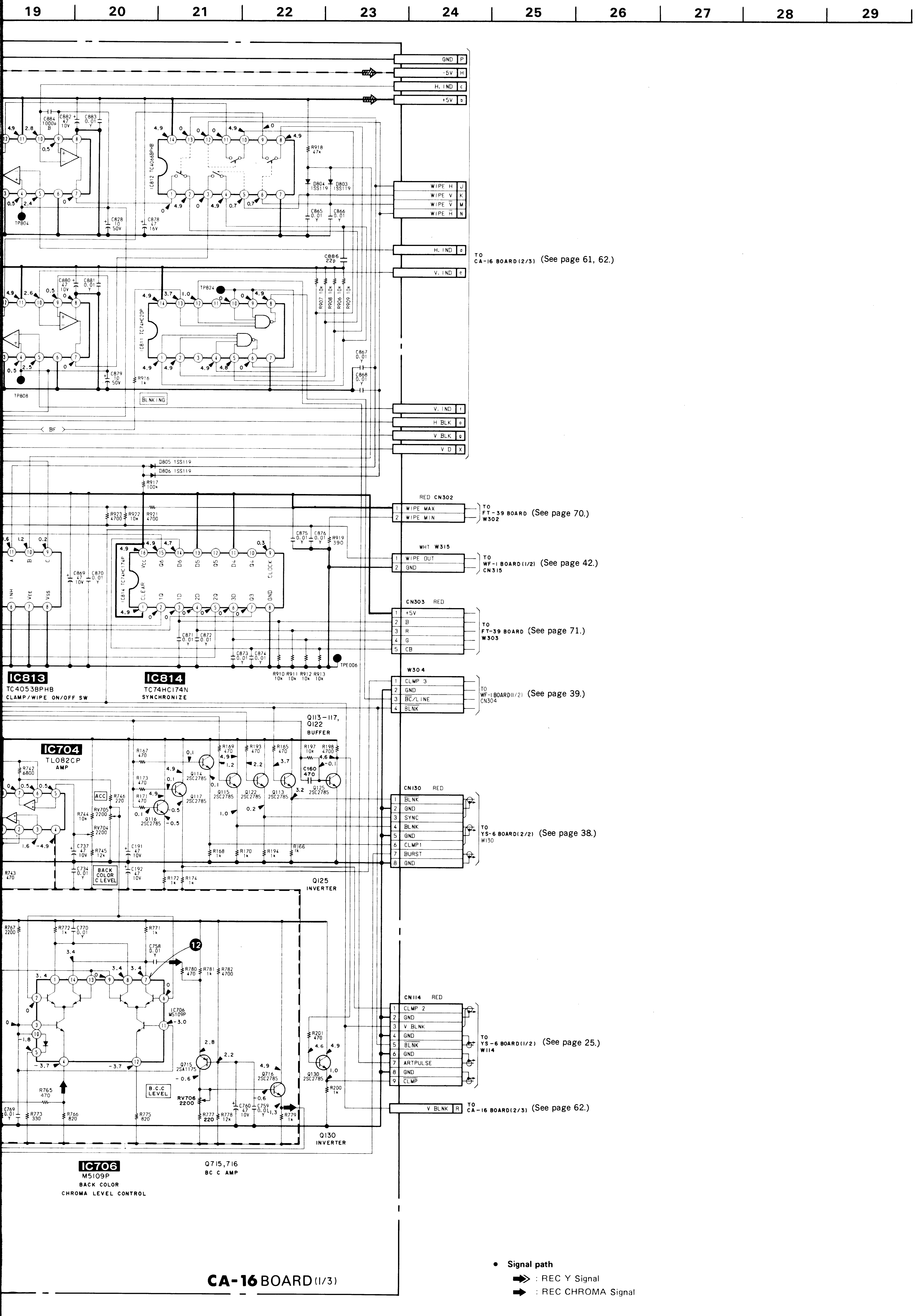
7
8
9
10
11
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
(See page 76.) TO PW-61 BOARD W110
CN110 4P RED
+5V
GND
-5V
+9V
(See page 25.) TO YS-6 BOARD (1/2) W133
CN133 2P BLK
Y SEP
GND
(See page 61.) TO CA-16 BOARD (2/3)
(See page 64.) TO CA-16 BOARD (3/3)
Q101,102 LPF
Q103-105 Y AMP
IC101 μPC319C
⑤⑫ SYNC SEP
⑩⑦ V SYNC SEP
SN74LS221N CLAMP PULSE
Q106,107 CLAMP
Q108,109,126 LPF
IC102 μPC319C SYNC SEP
Q127 BUFFER
Q128 DC REFERENCE
IC111 SN74LS221N
⑨⑫⑤ VD PULSE GENERATOR
②⑬ HALF H KILLER
Q110 RAMP WAVEFOMER
IC104 MA1144I AFC
HPRE DRIVE
HOSC
AFC
SYNC SEP
IC107 TC4040BP
IC108 TC74HC11P
V BLANKING TRIGGER
IC106 M51848L V BLANKING PULSE GENERATOR
Q111,112 V BLANKING TRRIGGER
IC112
IC112 M51848L
Q123 V BLANKING TRIGGER
Q129 DTA114ES
Q119-121 SYNC PULSE GENERATOR
Q701 Y BUFFER
Q702 SC 180° BUFFER
Q703 SC 90° BUFFER
SYNC. SEP
HD COMP.
BLK COMP.
ID KILLER DRT.
R-Y DEMOD.
B-Y DEMOD.
ID PULSE
BURST GATE PULSE
ACC DET.
APC DET.
TINT
4Fsc VCXO
2nd. AMP
1st. AMP
X701 17.734MHz
IC703 M51271SP DECODER APC
Q704,705 PHASE SHIFT
Q711 B BUFFER
TPE002
(See page 28.) TO YS-6 BOARD (1/2) W102
CN102 4P 2.0 WHT
SC (90°)
GND
SC (180°)
GND
(See page 39.) TO WF-1 BOARD (1/2) CN306
W306 4P
B.C Y
GND
B.C C
GND


8
9
10
11
12
13
14
15
16
17
18
19
IC101
μPC319C
⑤⑫ SYNC SEP
⑩⑦ V SYNC SEP
IC103
SN74LS221N
CLAMP PULSE GENERATOR
+5V
GND
CLAMP
IC809
μPC319C
WIPE H COMPARATOR
IC812
TC4066BPHB
①②⑩⑪ WIPE H/H̄ SW
③④⑧⑨ WIPE V/V̄ SW
TP804
IC810
μPC319C
WIPE V COMPARATOR
IC811
TC74HC20P
BC/LINE SELECT
TP808
IC105
SN74LS123N
①④ H FRONT BLANK PULSE GENERATOR
⑨⑤ H BACK BLANK PULSE GENERATOR
H.F BLNK
H.B BLNK
H.B
BF
IC102
μPC319C
SYNC SEP
Q127
BUFFER
Q128
DC REFERENCE
IC111
SN74LS221N
⑨⑫⑤ VD PULSE GENERATOR
②⑬ HALF H KILLER
V.B
Q719 2SC2785
Q720 2SC2785
BUFFER
IC701
TC74HC02P
PULSE GENERATOR
BACK COLOR BAR
IC702
TC74HC193P
BACK COLOR BAR GENERETOR
R
B
G
TPE004
IC813
TC4053BPHB
③④ CLAMP/WIPE ON/
HD
IC107
TC4040BP
IC108
TC74HC11P
V BLANKING TRIGGER
IC106
M51848L
V BLANKING PULSE GENERATOR
VD
V BLANK
Q123
V BLANKING TRIGGER
Q124
INVERTER
V BLK
Q706,707
PHASE SHIFT
IC110
TC74HC00P
IC109
TC74HC08P
Q119-121
SYNC PULSE GENERATOR
Q708
BUFFER
Q702
SC 180° BUFFER
Q703
SC 90° BUFFER
IC705
V7040
ENCODER
TINT
fsc
X701 17.734MHz
Q704,705
PHASE SHIFT
Q711
B BUFFER
Q710
G BUFFER
Q709
R BUFFER
TPE009
Q718 DTC114ES
GAIN SWITCH
Q713,714
INVERT AMP
FL701
BACK COLOR Y LEVEL
①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪

BACK COLOR/AUDIO (1/2)

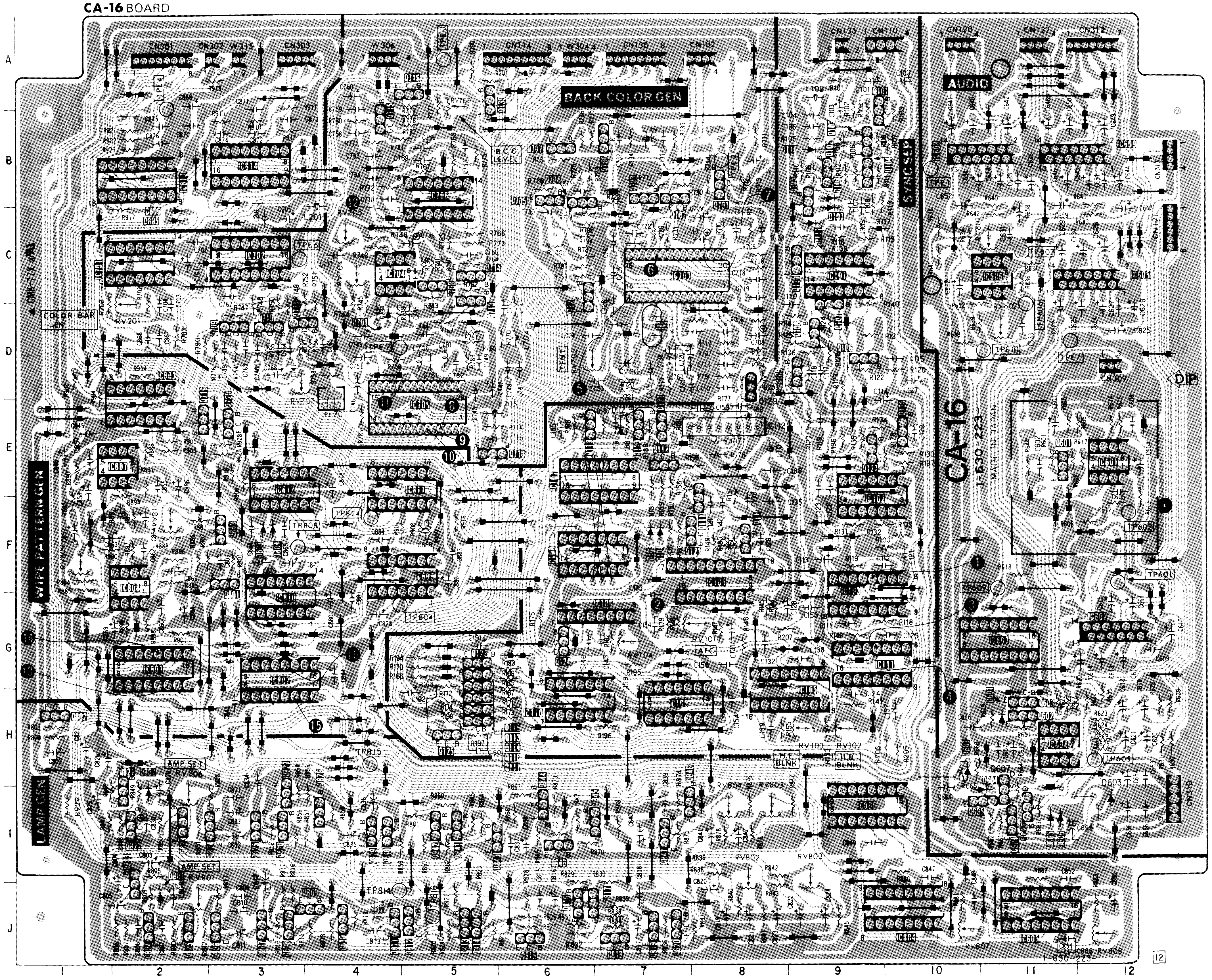

19
20
21
22
23
24
25
26
27
28
29
GND P
-5V H
H. IND c
+5V b
IC812 TC4066BPHB
R918 47k
D804 1SS119
D803 1SS119
C865 0.01
C866 0.01
C828 10 50V
C878 47 16V
C884 1000p
C882 47 10V
C883 0.01
TP804
WIPE H J
WIPE V K
WIPE V̄ M
WIPE H̄ N
H. IND d
V. IND e
TO CA-16 BOARD(2/3) (See page 61, 62.)
C886 22p
C880 47 10V
C881 0.01
TP824
IC811 TC74HC20P
R907 10k
R908 10k
R906 10k
R909 10k
C867 0.01
C868 0.01
C879 10 50V
R916 1k
BLNKING
TP808
BF
V. IND f
H BLK o
V BLK q
V D X
D805 1SS119
D806 1SS119
R917 100k
R923 4700
R922 10k
R921 4700
RED CN302
1 WIPE MAX
2 WIPE MIN
TO FT-39 BOARD W302 (See page 70.)
C875 0.01
C876 0.01
R919 390
WHT W315
1 WIPE OUT
2 GND
TO WF-1 BOARD(1/2) CN315 (See page 42.)
C869 47 10V
C870 0.01
IC814 TC74HC174P
CLEAR
CLOCK
CN303 RED
1 +5V
2 B
3 R
4 G
5 CB
TO FT-39 BOARD W303 (See page 71.)
C871 0.01
C872 0.01
C873 0.01
C874 0.01
TPE006
R910 10k
R911 10k
R912 10k
R913 10k
IC813
TC4053BPHB
CLAMP/WIPE ON/OFF SW
IC814
TC74HC174N
SYNCHRONIZE
W304
1 CLMP 3
2 GND
3 BC/LINE
4 BLNK
TO WF-1 BOARD(1/2) CN304 (See page 39.)
Q113-117, Q122
BUFFER
IC704
TL082CP
AMP
R742 6800
R167 470
R173 470
R171 470
R169 470
R193 470
R165 470
R197 10k
R198 4700
C160 470
Q114 2SC2785
Q115 2SC2785
Q116 2SC2785
Q117 2SC2785
Q122 2SC2785
Q113 2SC2785
Q125 2SC2785
ACC
R746 220
R744 10k
RV705 2200
RV704 2200
C737 47 10V
R745 12k
C191 47 10V
R168 1k
R170 1k
R194 1k
R166 1k
CN130 RED
1 BLNK
2 GND
3 SYNC
4 BLNK
5 GND
6 CLMP1
7 BURST
8 GND
TO YS-6 BOARD(2/2) W130 (See page 38.)
R743 470
C734 0.01
BACK COLOR C LEVEL
C192 47 10V
R172 1k
R174 1k
Q125
INVERTER
R767 2200
R772 1k
C770 0.01
R771 1k
C758 0.01
⑫
R780 470
R781 1k
R782 4700
IC706 M5109P
CN114 RED
1 CLMP 2
2 GND
3 V BLNK
4 GND
5 BLNK
6 GND
7 ARTPULSE
8 GND
9 CLMP
TO YS-6 BOARD(1/2) W114 (See page 25.)
R201 470
Q715 2SA1175
Q716 2SC2785
Q130 2SC2785
R200 1k
B.C.C LEVEL
RV706 2200
R765 470
C769 0.01
R773 330
R766 820
R775 820
R777 220
R778 12k
C760 47 10V
C759 0.01
R779 1k
V BLNK R
TO CA-16 BOARD(2/3) (See page 62.)
Q130
INVERTER
IC706
M5109P
BACK COLOR
CHROMA LEVEL CONTROL
Q715,716
BC C AMP
CA-16 BOARD (1/3)
• Signal path
➩ : REC Y Signal
➡ : REC CHROMA Signal

BACK COLOR/AUDIO (1/2)

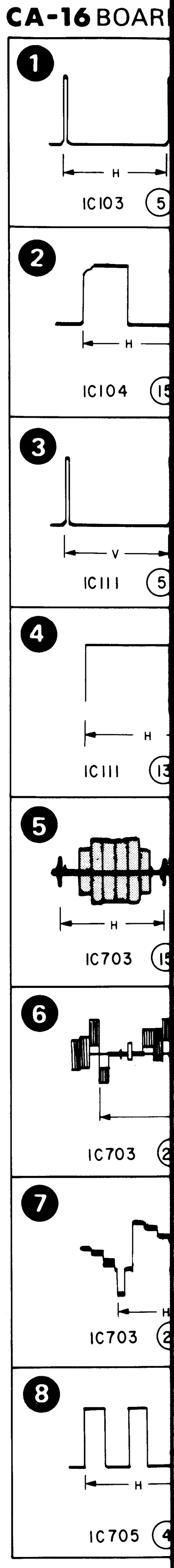
BACK COLOR/AUDIO (1/2)

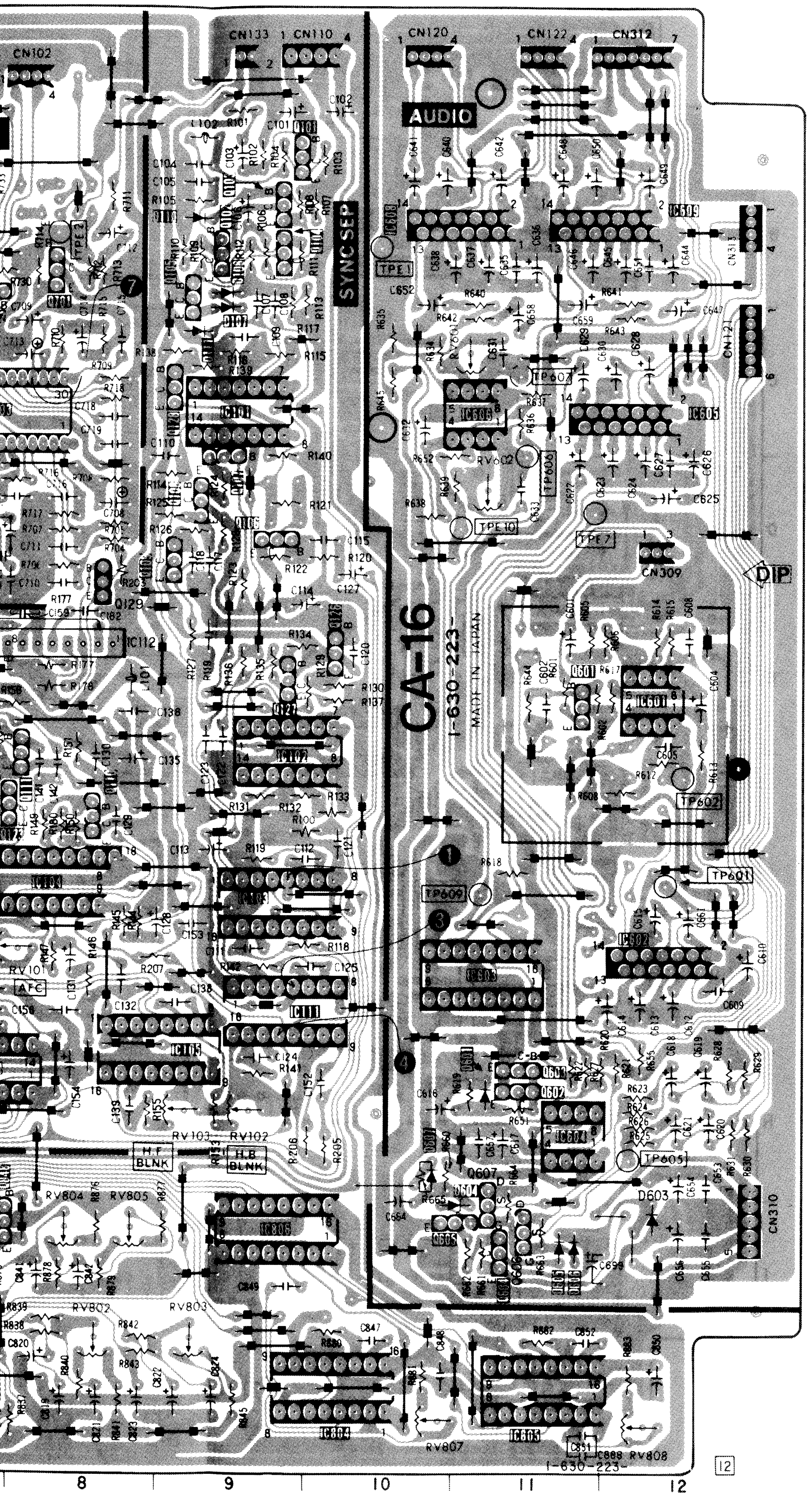
CA-16 (BACK COLOR/AUDIO) PRINTED WIRING BOARD

—Ref. No. CA-16 BOARD : 3000 series—


CA-16 BOARD
A
B
C
D
E
F
G
H
I
J
1
2
3
4
5
6
7
8
9
10
11
12
CN301
CN302
W315
CN303
W306
CN114
W304
CN130
CN102
CN133
CN110
CN120
CN122
CN312
CN121
CN309
CN310
BACK COLOR GEN
AUDIO
SYNC SEP
B.C.C LEVEL
COLOR BAR GEN
WIPE PATTERN GEN
LAMP GEN
AMP SET
AFC
H.F BLNK
H.B BLNK
DIP
TENT
CA-16
1-630-223
MADE IN JAPAN
CMK-77X
IC703
IC705
IC101
IC111
IC105
IC806
IC804
IC805
IC601
IC603
IC606
IC605
IC608
IC609
IC801
IC807
IC808
IC809
IC810
IC811
IC812
IC813
IC814
IC701
IC702
IC704
IC706
TP624
TP808
TP804
TP815
TP814
TP609
TP602
TP601
TP605
TP607
TP610
TPE1
TPE2
TPE6
TPE7
TPE9
RV201
RV702
RV705
RV101
RV104
RV103
RV102
RV801
RV802
RV803
RV804
RV805
RV806
RV807
RV808
RV810
RV602
1-630-223-
12

CA-16 BOARD	
D103	F-7
D104	F-7
D107	C-9
D108	C-9
D110	B-9
D111	C-9
D112	E-7
D601	H-11
D603	I-12
D604	I-11
D605	I-11
D606	I-11
D607	H-10
D701	D-4
D801	J-2
D802	H-2
D803	F-3
D804	F-3
D805	C-2
D806	C-2
IC101	C-9
IC102	F-9
IC103	G-9
IC104	G-8
IC105	H-9
IC106	G-7
IC107	E-6
IC108	F-6
IC109	H-7
IC110	H-6
IC111	G-9
IC112	E-8
IC601	G-12
IC602	G-12
IC603	G-11
IC604	H-11
IC605	C-12
IC606	C-11
IC608	B-10
IC609	B-12
IC701	C-2
IC702	C-3
IC703	C-7
IC704	C-4
IC705	E-5
IC706	B-5
IC801	G-2
IC802	H-3
IC803	D-2
IC804	J-10
IC805	J-11
IC806	I-9
IC807	E-2
IC808	G-2
IC809	F-5
IC810	G-3
IC811	F-5
IC812	F-3
IC813	B-2
IC814	B-3
Q101	B-9
Q102	B-9
Q103	B-9
Q104	B-9
Q105	B-9
Q106	D-9
Q107	D-9
Q108	D-9
Q109	D-9
Q110	F-8
Q111	F-8
Q112	E-5
Q113	H-5
Q114	H-5
Q115	H-5
Q116	H-5
Q117	H-5
Q119	E-6
Q120	E-7
Q121	E-7
Q122	G-5
Q123	F-7
Q124	G-6
Q125	H-5
Q126	E-10
Q127	E-9
Q128	C-9
Q129	E-8
Q130	B-5
Q601	E-11
Q602	H-11
Q603	H-11
Q604	I-11
Q605	I-10
Q606	I-11
Q607	I-11
Q701	B-8
Q701	B-7
Q702	B-7
Q703	B-7
Q704	C-6
Q705	C-6
Q706	B-7
Q707	B-6
Q708	C-5
Q709	D-3
Q710	D-3
Q711	D-3
Q712	D-6
Q713	D-5
Q714	C-5
Q715	B-4
Q716	A-5
Q718	E-5
Q719	E-2
Q720	E-3
Q801	G-3
Q802	H-1
Q803	J-2
Q804	J-2
Q805	J-2
Q806	J-3
Q807	J-3
Q808	J-3
Q809	J-3
Q810	J-4
Q811	J-4
Q812	J-5
Q813	J-5
Q814	J-5
Q815	J-6
Q816	J-6
Q817	J-6
Q818	J-7
Q819	J-7
Q820	J-7
Q821	I-2
Q822	I-2
Q823	I-2
Q824	I-2
Q825	I-3
Q826	I-3
Q827	I-3
Q828	I-4
Q829	I-4
Q840	I-4
Q841	I-5
Q842	I-5
Q843	I-5
Q844	I-6
Q845	I-6
Q846	I-6
Q847	I-7
Q848	I-7
Q849	F-3

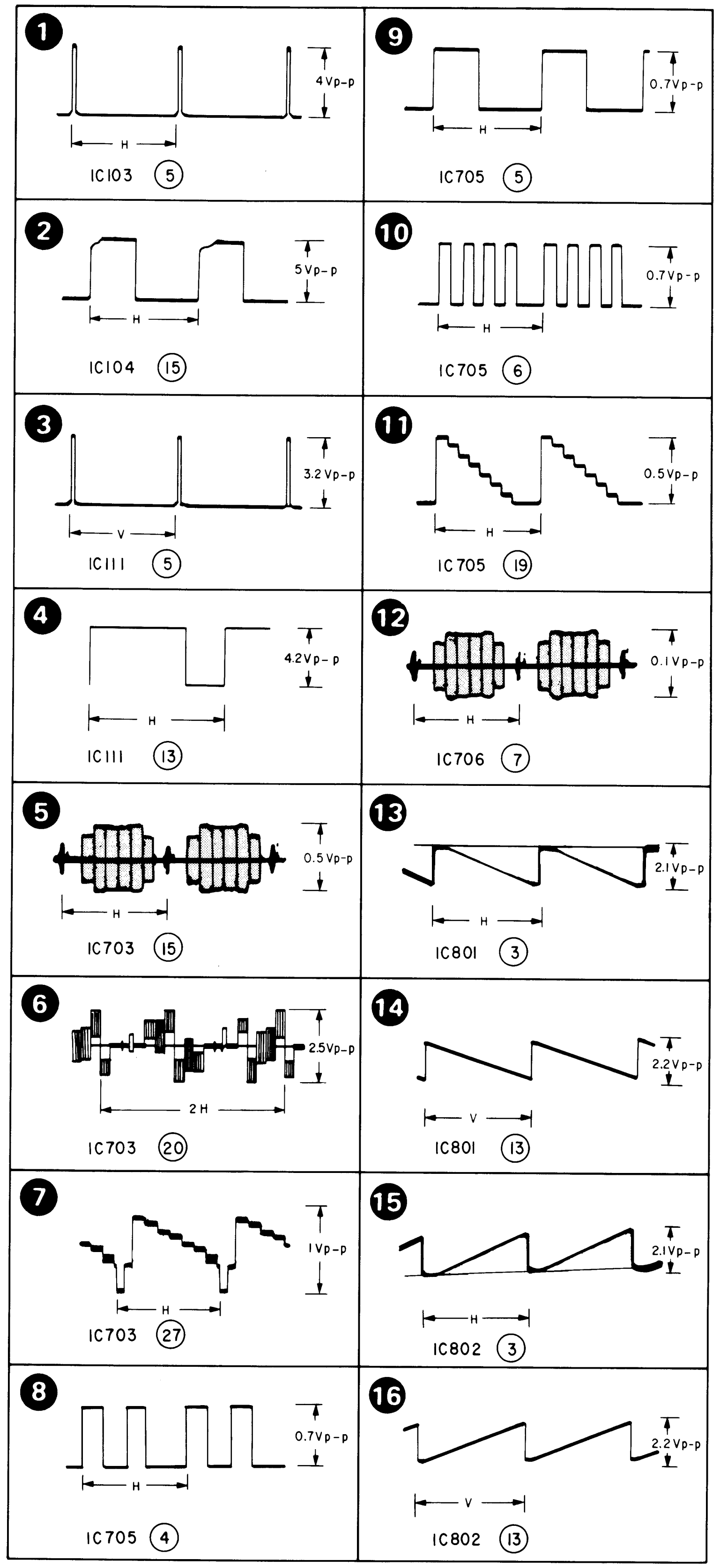

CA-16 BOAR
❶
H
IC103 (5
❷
H
IC104 (1
❸
V
IC111 (5
❹
H
IC111 (1
❺
H
IC703 (1
❻
IC703 (2
❼
H
IC703 (
❽
H
IC705 (


CN102
CN133
CN110
CN120
CN122
CN312
AUDIO
SYNC SEP
TPE1
TPE2
TP607
TP608
TPE10
TPE7
CN309
DIP
CA-16
1-630-223-
MADE IN JAPAN
TP602
TP601
TP609
TP605
CN310
RV101
RV102
H.F BLNK
H.B BLNK
AFC
RV804
RV805
RV802
RV803
RV807
RV808
1-630-223-
8
9
10
11
12

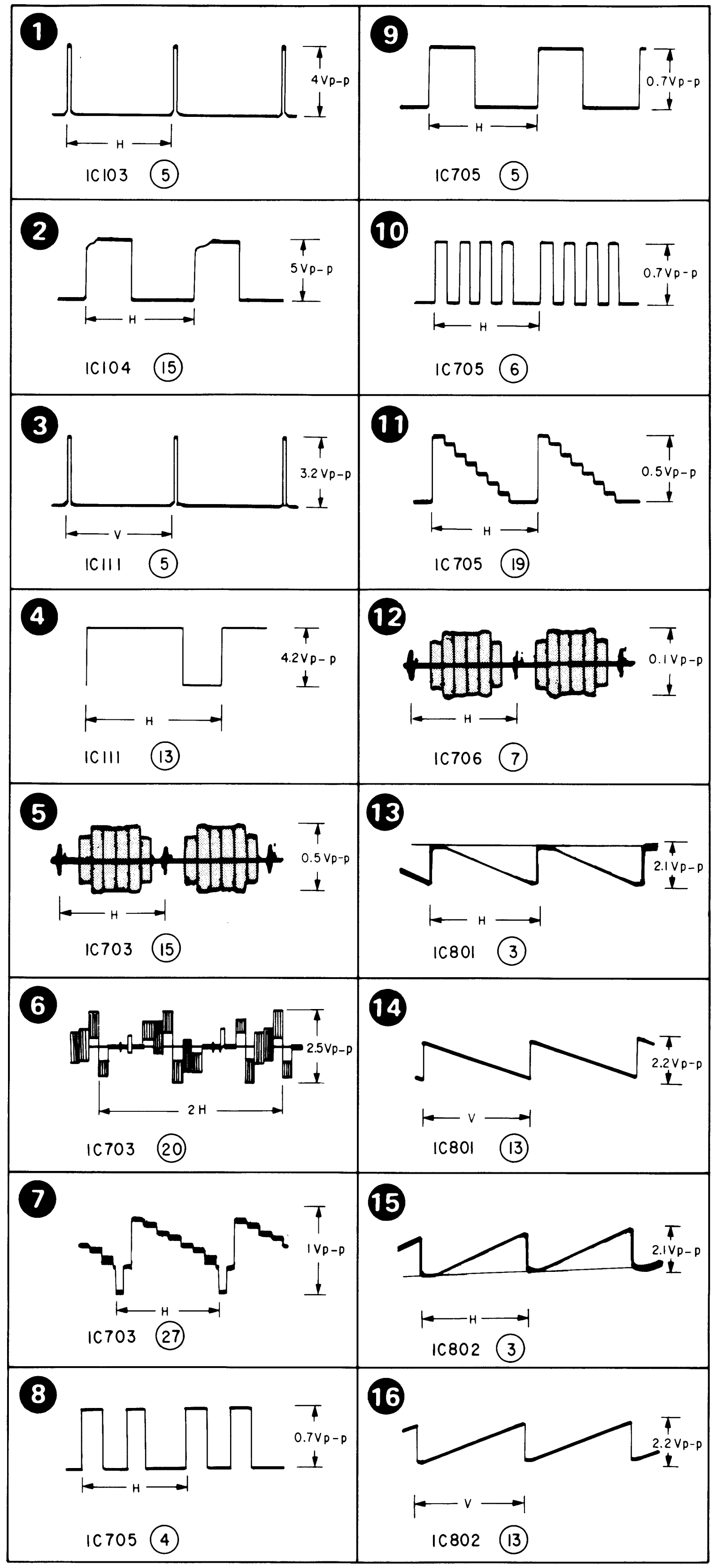
CA-16 BOARD

D103	F-7
D104	F-7
D107	C-9
D108	C-9
D110	B-9
D111	C-9
D112	E-7
D601	H-11
D603	I-12
D604	I-11
D605	I-11
D606	I-11
D607	H-10
D701	D-4
D801	J-2
D802	H-2
D803	F-3
D804	F-3
D805	C-2
D806	C-2
IC101	C-9
IC102	F-9
IC103	G-9
IC104	G-8
IC105	H-9
IC106	G-7
IC107	E-6
IC108	F-6
IC109	H-7
IC110	H-6
IC111	G-9
IC112	E-8
IC601	G-12
IC602	G-12
IC603	G-11
IC604	H-11
IC605	C-12
IC606	C-11
IC608	B-10
IC609	B-12
IC701	C-2
IC702	C-3
IC703	C-7
IC704	C-4
IC705	E-5
IC706	B-5
IC801	G-2
IC802	H-3
IC803	D-2
IC804	J-10
IC805	J-11
IC806	I-9
IC807	E-2
IC808	G-2
IC809	F-5
IC810	G-3
IC811	F-5
IC812	F-3
IC813	B-2
IC814	B-3
Q101	B-9
Q102	B-9
Q103	B-9
Q104	B-9
Q105	B-9
Q106	D-9
Q107	D-9
Q108	D-9
Q109	D-9
Q110	F-8
Q111	F-8
Q112	E-5
Q113	H-5
Q114	H-5
Q115	H-5
Q116	H-5
Q117	H-5
Q119	E-6
Q120	E-7
Q121	E-7
Q122	G-5
Q123	F-7
Q124	G-6
Q125	H-5
Q126	E-10
Q127	E-9
Q128	C-9
Q129	E-8
Q130	B-5
Q601	E-11
Q602	H-11
Q603	H-11
Q604	I-11
Q605	I-10
Q606	I-11
Q607	I-11
Q701	B-8
Q701	B-7
Q702	B-7
Q703	B-7
Q704	C-6
Q705	C-6
Q706	B-7
Q707	B-6
Q708	C-5
Q709	D-3
Q710	D-3
Q711	D-3
Q712	D-6
Q713	D-5
Q714	C-5
Q715	B-4
Q716	A-5
Q718	E-5
Q719	E-2
Q720	E-3
Q801	G-3
Q802	H-1
Q803	J-2
Q804	J-2
Q805	J-2
Q806	J-3
Q807	J-3
Q808	J-3
Q809	J-3
Q810	J-4
Q811	J-4
Q812	J-5
Q813	J-5
Q814	J-5
Q815	J-6
Q816	J-6
Q817	J-6
Q818	J-7
Q819	J-7
Q820	J-7
Q821	I-2
Q822	I-2
Q823	I-2
Q824	I-2
Q825	I-3
Q826	I-3
Q827	I-3
Q828	I-4
Q829	I-4
Q840	I-4
Q841	I-5
Q842	I-5
Q843	I-5
Q844	I-6
Q845	I-6
Q846	I-6
Q847	I-7
Q848	I-7
Q849	F-3

CA-16 BOARD



CA-16 BOARD



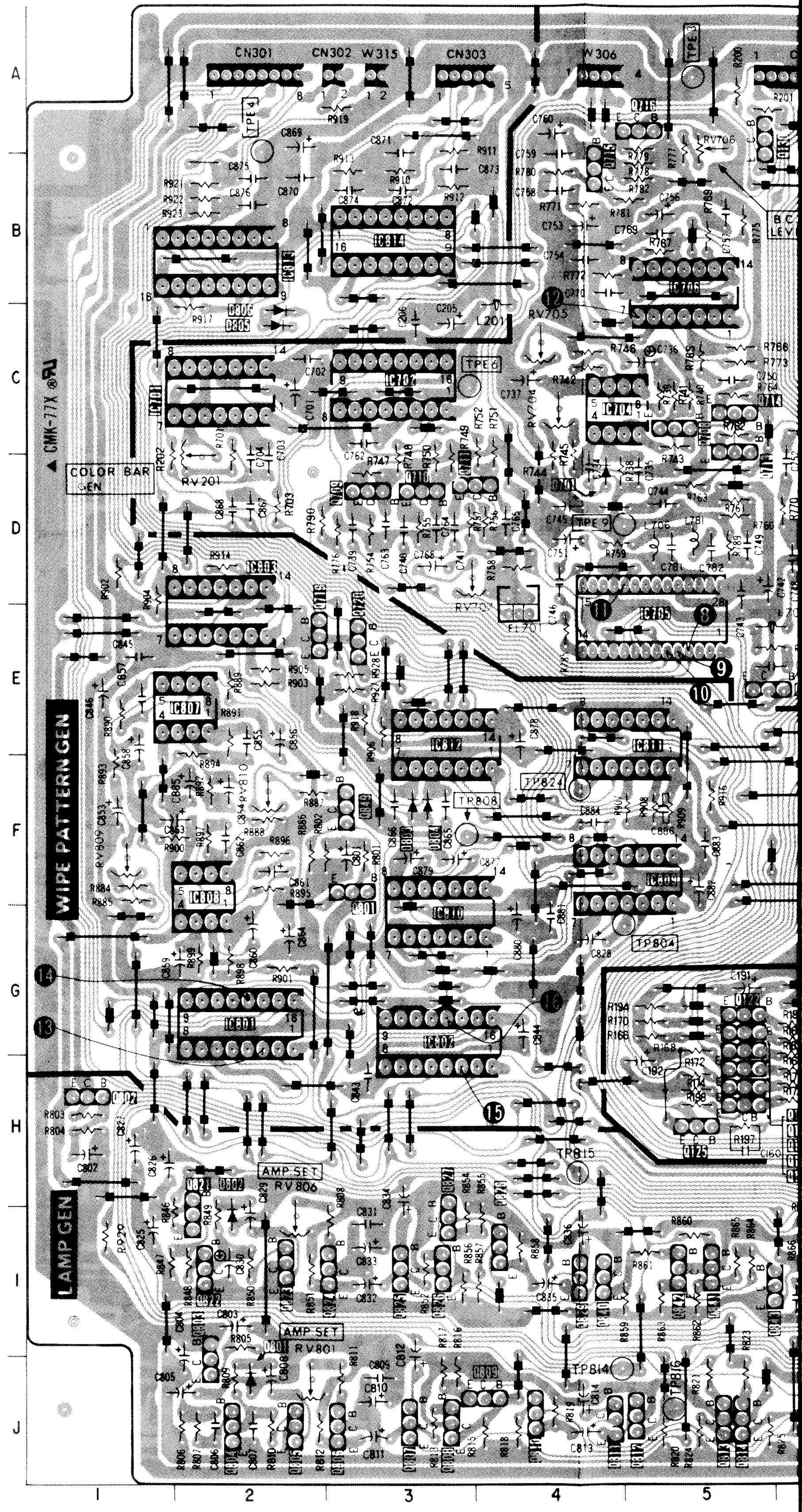
CA-16 (BACK COLOR/AUDIO) PRINTED WIRING BOARD

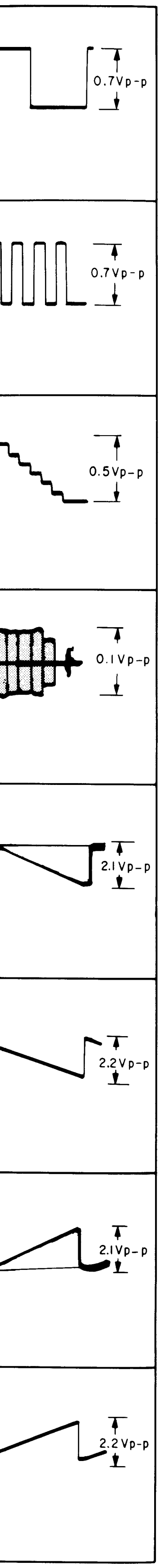
—Ref. No. CA-16 BOARD : 3000 series—

CA-16 BOARD

D103	F-7
D104	F-7
D107	C-9
D108	C-9
D110	B-9
D111	C-9
D112	E-7
D601	H-11
D603	I-12
D604	I-11
D605	I-11
D606	I-11
D607	H-10
D701	D-4
D801	J-2
D802	H-2
D803	F-3
D804	F-3
D805	C-2
D806	C-2
IC101	C-9
IC102	F-9
IC103	G-9
IC104	G-8
IC105	H-9
IC106	G-7
IC107	E-6
IC108	F-6
IC109	H-7
IC110	H-6
IC111	G-9
IC112	E-8
IC601	G-12
IC602	G-12
IC603	G-11
IC604	H-11
IC605	C-12
IC606	C-11
IC608	B-10
IC609	B-12
IC701	C-2
IC702	C-3
IC703	C-7
IC704	C-4
IC705	E-5
IC706	B-5
IC801	G-2
IC802	H-3
IC803	D-2
IC804	J-10
IC805	J-11
IC806	I-9
IC807	E-2
IC808	G-2
IC809	F-5
IC810	G-3
IC811	F-5
IC812	F-3
IC813	B-2
IC814	B-3
Q101	B-9
Q102	B-9
Q103	B-9
Q104	B-9
Q105	B-9
Q106	D-9
Q107	D-9
Q108	D-9
Q109	D-9
Q110	F-8
Q111	F-8
Q112	E-5
Q113	H-5
Q114	H-5
Q115	H-5
Q116	H-5
Q117	H-5
Q119	E-6
Q120	E-7
Q121	E-7
Q122	G-5
Q123	F-7
Q124	G-6
Q125	H-5
Q126	E-10
Q127	E-9
Q128	C-9
Q129	E-8
Q130	B-5
Q601	E-11
Q602	H-11
Q603	H-11
Q604	I-11
Q605	I-10
Q606	I-11
Q607	I-11
Q701	B-8
Q701	B-7
Q702	B-7
Q703	B-7
Q704	C-6
Q705	C-6
Q706	B-7
Q707	B-6
Q708	C-5
Q709	D-3
Q710	D-3
Q711	D-3
Q712	D-6
Q713	D-5
Q714	C-5
Q715	B-4
Q716	A-5
Q718	E-5
Q719	E-2
Q720	E-3
Q801	G-3
Q802	H-1
Q803	J-2
Q804	J-2
Q805	J-2
Q806	J-3
Q807	J-3
Q808	J-3
Q809	J-3
Q810	J-4
Q811	J-4
Q812	J-5
Q813	J-5
Q814	J-5
Q815	J-6
Q816	J-6
Q817	J-6
Q818	J-7
Q819	J-7
Q820	J-7
Q821	I-2
Q822	I-2
Q823	I-2
Q824	I-2
Q825	I-3
Q826	I-3
Q827	I-3
Q828	I-4
Q829	I-4
Q840	I-4
Q841	I-5
Q842	I-5
Q843	I-5
Q844	I-6
Q845	I-6
Q846	I-6
Q847	I-7
Q848	I-7
Q849	F-3

CA-16 BOARD


A
B
C
D
E
F
G
H
I
J
1
2
3
4
5
CN301
CN302
W315
CN303
W306
TPE4
TPE6
TPE9
COLOR BAR GEN
CMK-77X
RV201
RV705
WIPE PATTERN GEN
LAMP GEN
AMP SET RV806
AMP SET RV801
TP808
TP824
TP804
TP815
TP814
9
10
11
12
13
14
15
16

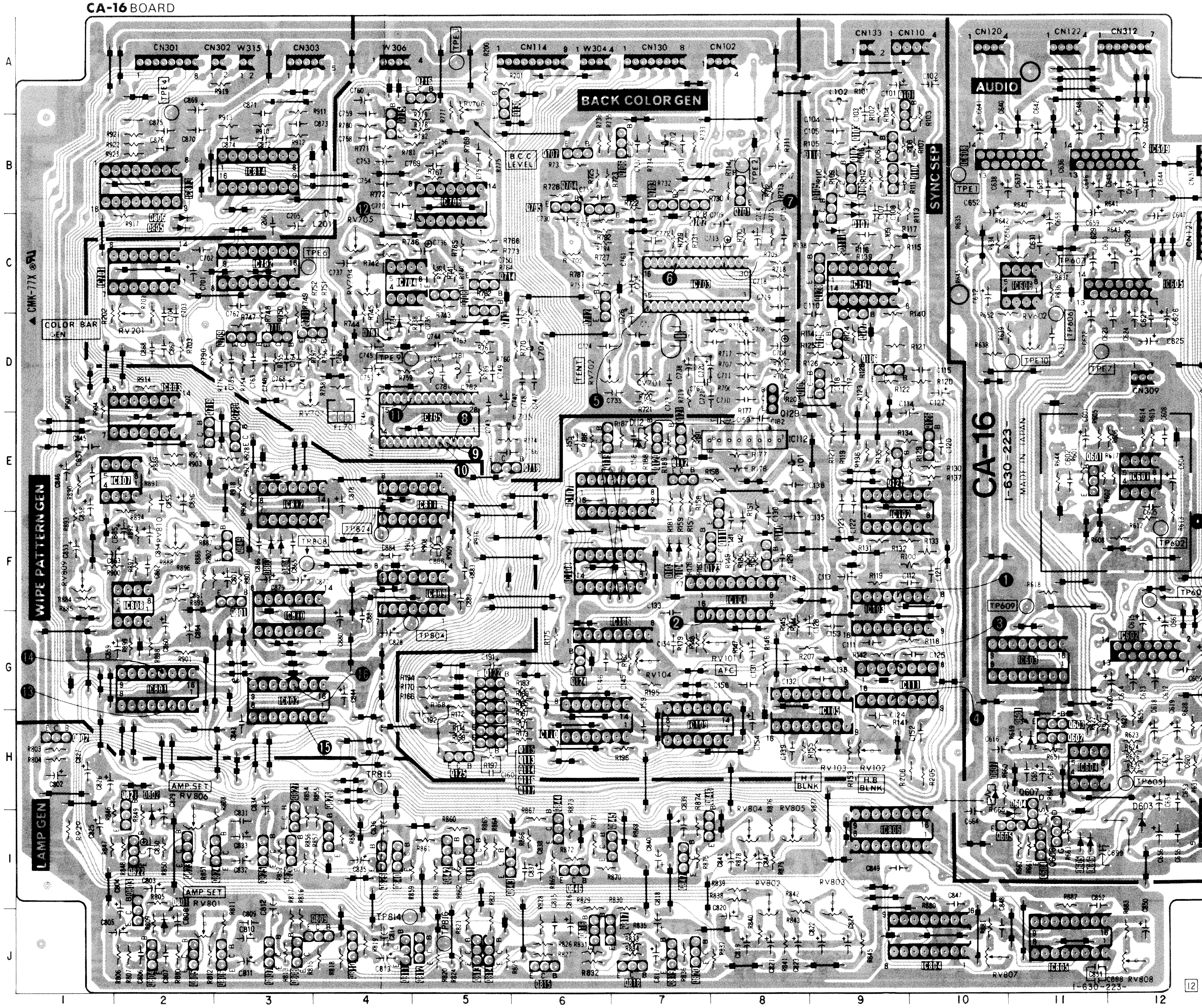

0.7Vp-p
0.7Vp-p
0.5Vp-p
0.1Vp-p
2.1Vp-p
2.2Vp-p
2.1Vp-p
2.2Vp-p

CA-16 (BACK COLOR/AUDIO) PRINTED WIRING BOARD

—Ref. No. CA-16 BOARD : 3000 series—

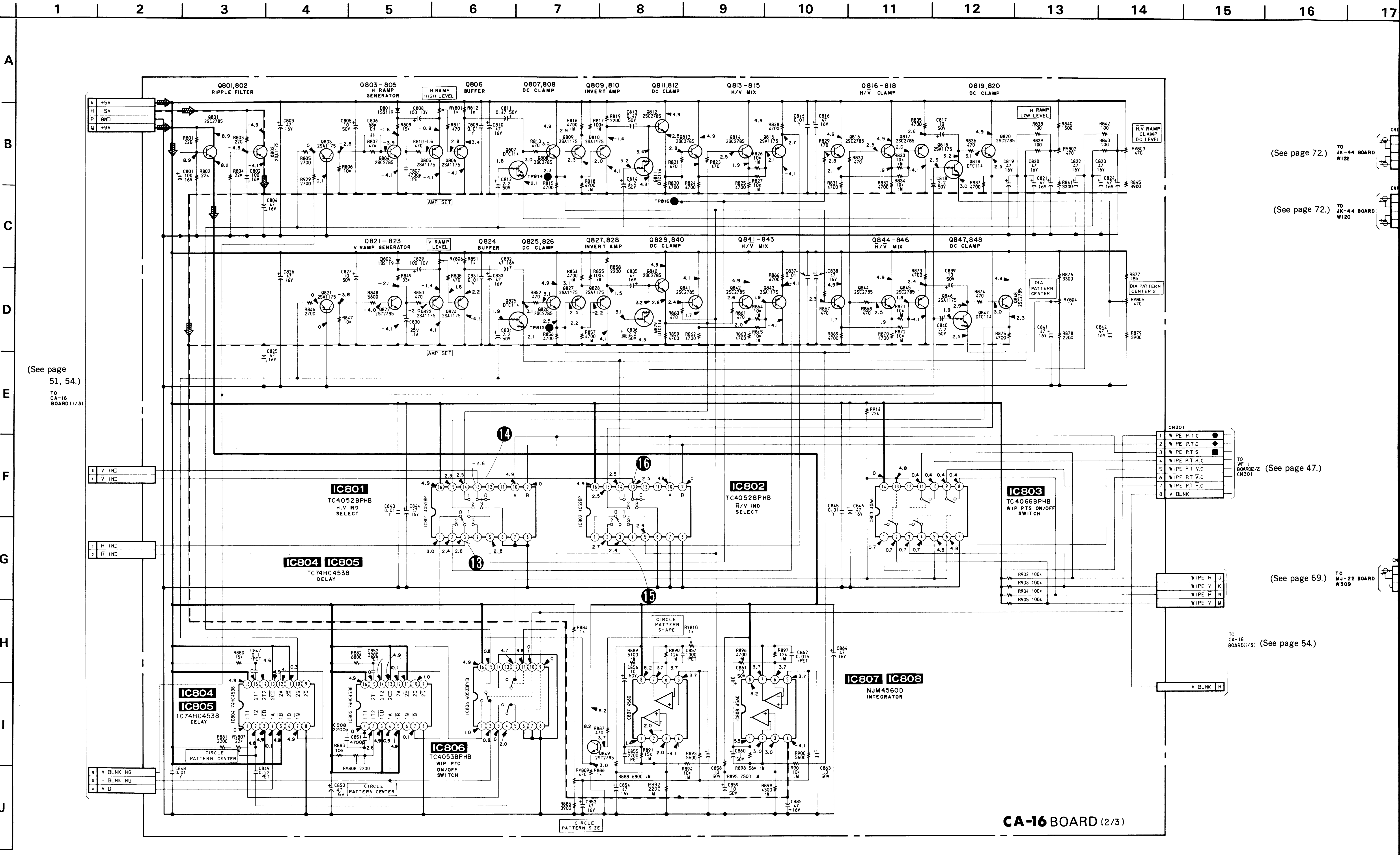
CA-16 BOARD

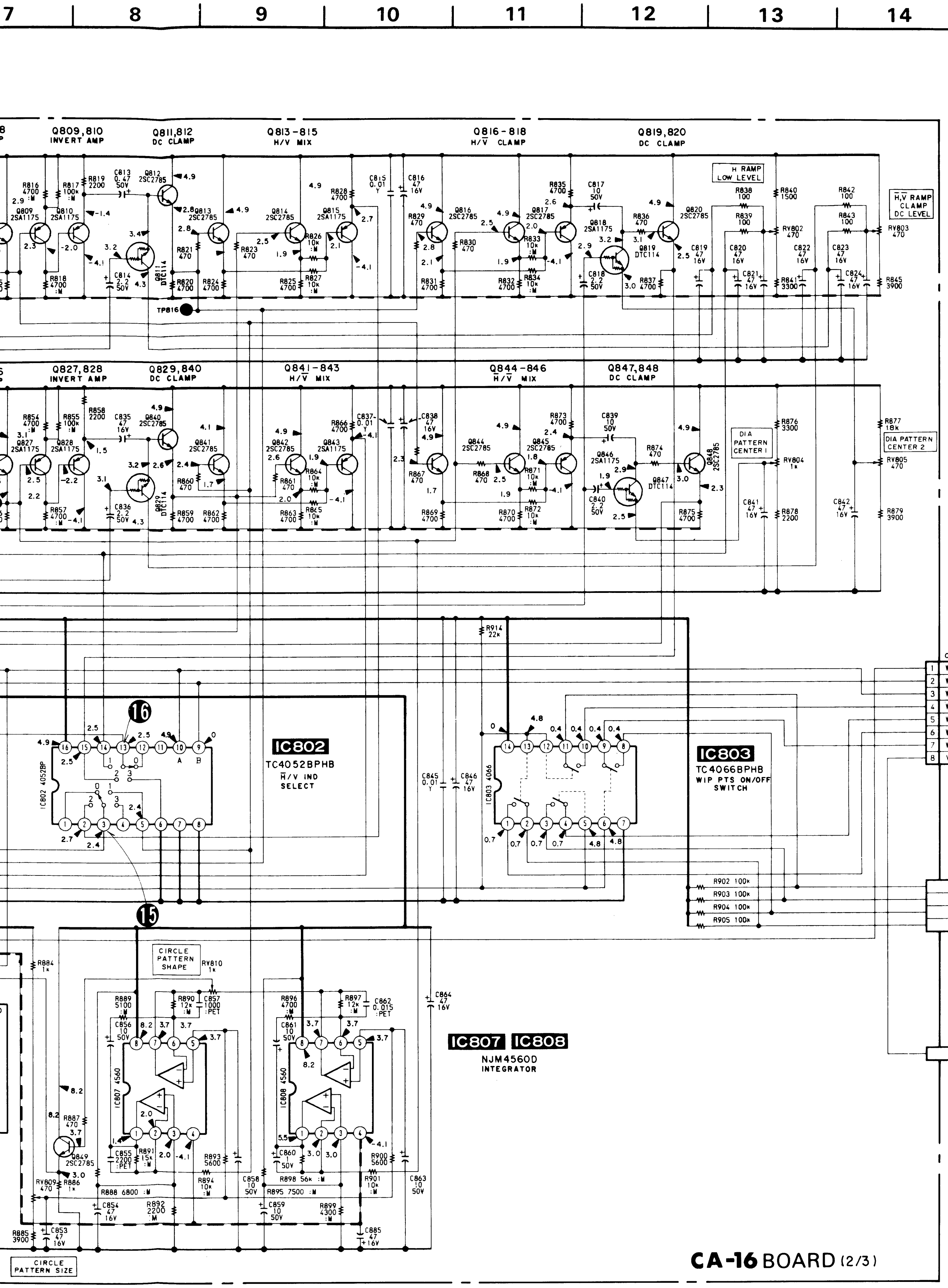
D103	F-7
D104	F-7
D107	C-9
D108	C-9
D110	B-9
D111	C-9
D112	E-7
D601	H-11
D603	I-12
D604	I-11
D605	I-11
D606	I-11
D607	H-10
D701	D-4
D801	J-2
D802	H-2
D803	F-3
D804	F-3
D805	C-2
D806	C-2
IC101	C-9
IC102	F-9
IC103	G-9
IC104	G-8
IC105	H-9
IC106	G-7
IC107	E-6
IC108	F-6
IC109	H-7
IC110	H-6
IC111	G-9
IC112	E-8
IC601	G-12
IC602	G-12
IC603	G-11
IC604	H-11
IC605	C-12
IC606	C-11
IC608	B-10
IC609	B-12
IC701	C-2
IC702	C-3
IC703	C-7
IC704	C-4
IC705	E-5
IC706	B-5
IC801	G-2
IC802	H-3
IC803	D-2
IC804	J-10
IC805	J-11
IC806	I-9
IC807	E-2
IC808	G-2
IC809	F-5
IC810	G-3
IC811	F-5
IC812	F-3
IC813	B-2
IC814	B-3
Q101	B-9
Q102	B-9
Q103	B-9
Q104	B-9
Q105	B-9
Q106	D-9
Q107	D-9
Q108	D-9
Q109	D-9
Q110	F-8
Q111	F-8
Q112	E-5
Q113	H-5
Q114	H-5
Q115	H-5
Q116	H-5
Q117	H-5
Q119	E-6
Q120	E-7
Q121	E-7
Q122	G-5
Q123	F-7
Q124	G-6
Q125	H-5
Q126	E-10
Q127	E-9
Q128	C-9
Q129	E-8
Q130	B-5
Q601	E-11
Q602	H-11
Q603	H-11
Q604	I-11
Q605	I-10
Q606	I-11
Q607	I-11
Q701	B-8
Q701	B-7
Q702	B-7
Q703	B-7
Q704	C-6
Q705	C-6
Q706	B-7
Q707	B-6
Q708	C-5
Q709	D-3
Q710	D-3
Q711	D-3
Q712	D-6
Q713	D-5
Q714	C-5
Q715	B-4
Q716	A-5
Q718	E-5
Q719	E-2
Q720	E-3
Q801	G-3
Q802	H-1
Q803	J-2
Q804	J-2
Q805	J-2
Q806	J-3
Q807	J-3
Q808	J-3
Q809	J-3
Q810	J-4
Q811	J-4
Q812	J-5
Q813	J-5
Q814	J-5
Q815	J-6
Q816	J-6
Q817	J-6
Q818	J-7
Q819	J-7
Q820	J-7
Q821	I-2
Q822	I-2
Q823	I-2
Q824	I-2
Q825	I-3
Q826	I-3
Q827	I-3
Q828	I-4
Q829	I-4
Q840	I-4
Q841	I-5
Q842	I-5
Q843	I-5
Q844	I-6
Q845	I-6
Q846	I-6
Q847	I-7
Q848	I-7
Q849	F-3

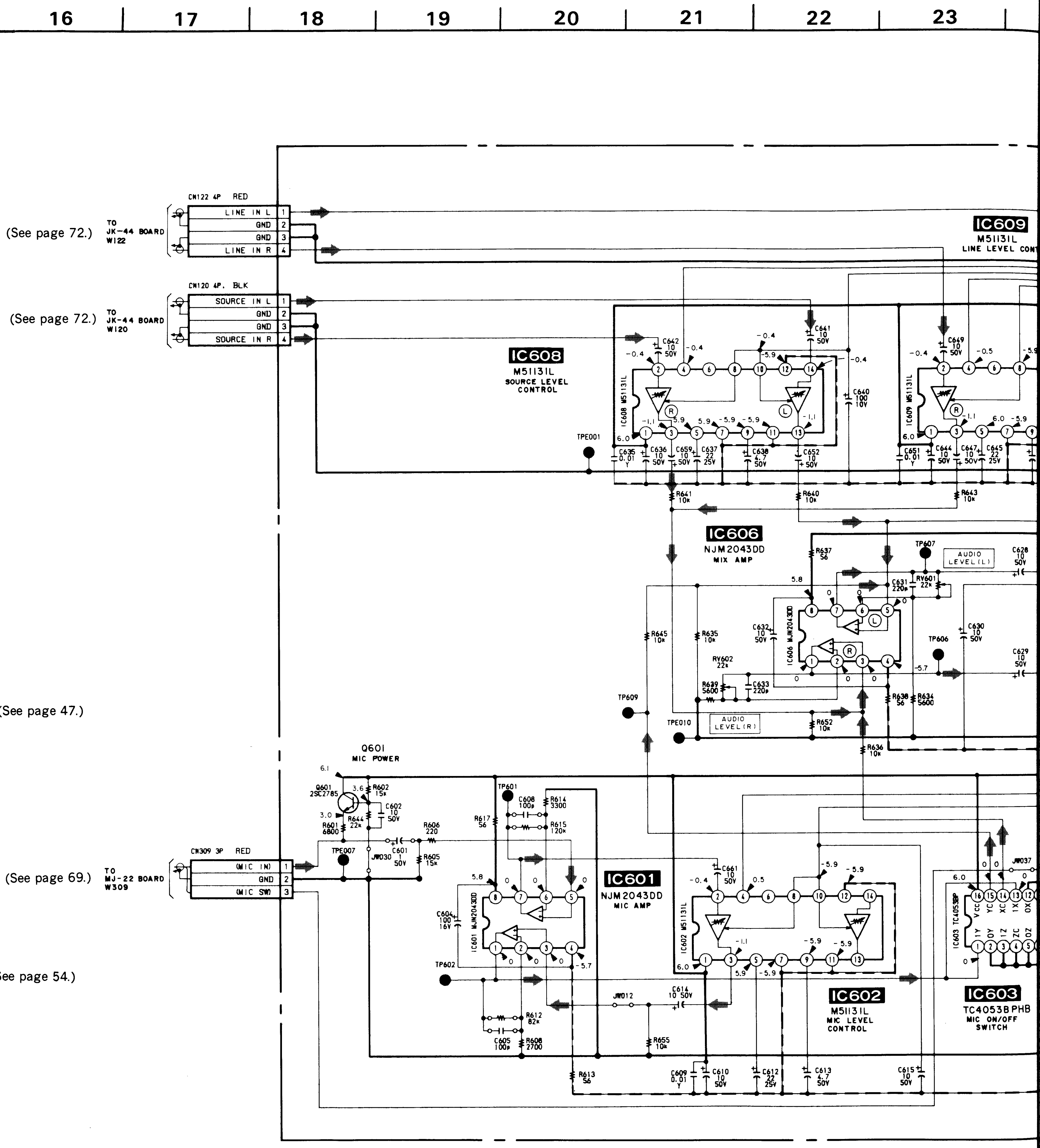

CA-16 BOARD
CN301
CN302
W315
CN303
W306
TPE3
CN114
W304
CN130
CN102
CN133
CN110
CN120
CN122
CN312
BACK COLOR GEN
AUDIO
SYNC SEP
BCC LEVEL
COLOR BAR GEN
WIPE PATTERN GEN
LAMP GEN
AMP SET
H.F BLNK
H.B BLNK
AFC
DIP
CA-16
1-630-223-
MADE IN JAPAN
CMK-77X
A
B
C
D
E
F
G
H
I
J
1
2
3
4
5
6
7
8
9
10
11
12

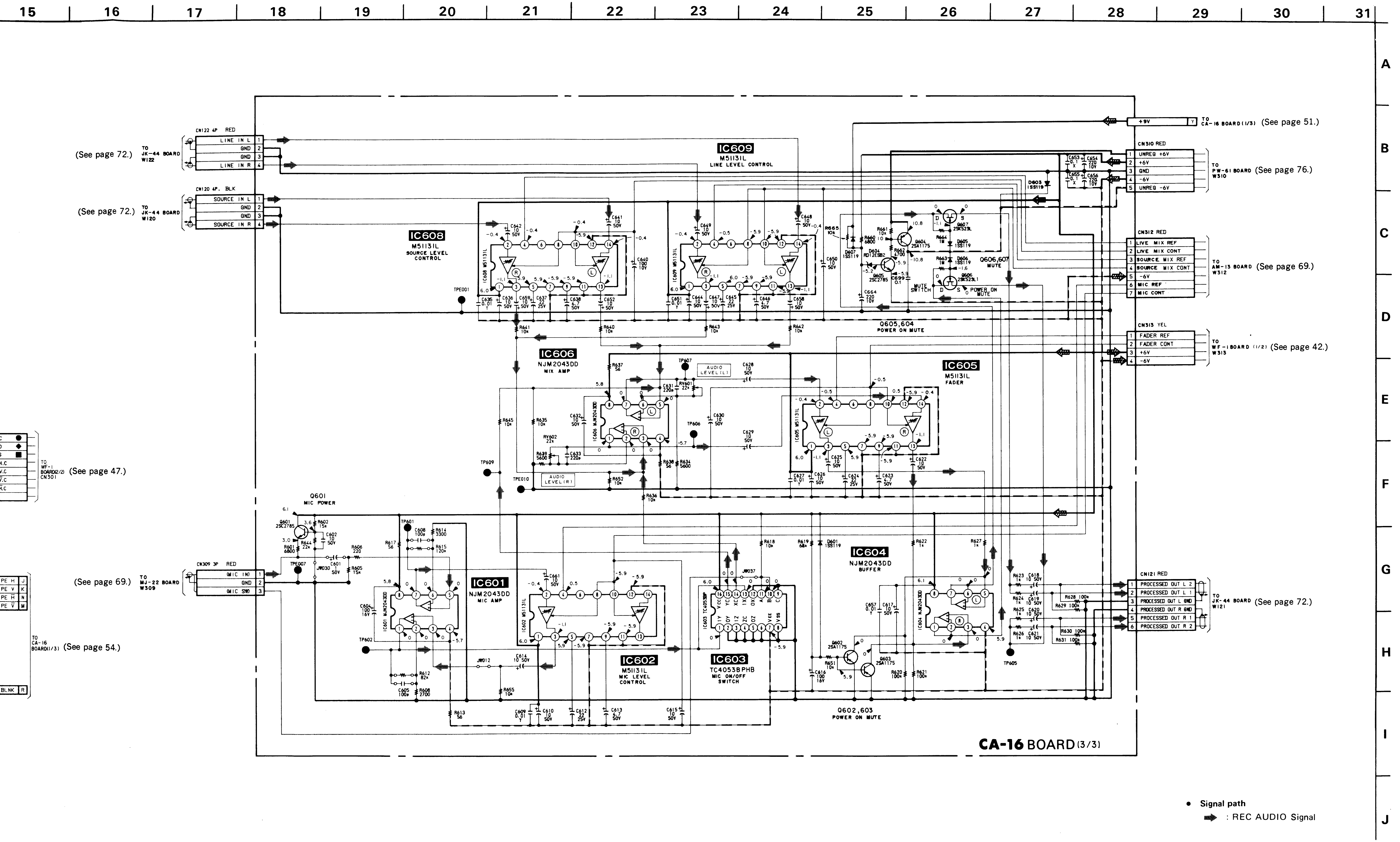
CA-16 (BACK COLOR/AUDIO) SCHEMATIC DIAGRAM

—Ref. No. CA-16 BOARD : 3000 series—


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
Q801,802 RIPPLE FILTER
Q803-805 H RAMP GENERATOR
H RAMP HIGH LEVEL
Q806 BUFFER
Q807,808 DC CLAMP
Q809,810 INVERT AMP
Q811,812 DC CLAMP
Q813-815 H/V MIX
Q816-818 H/V CLAMP
Q819,820 DC CLAMP
H RAMP LOW LEVEL
H,V RAMP CLAMP DC LEVEL
AMP SET
TP814
TP816
Q821-823 V RAMP GENERATOR
V RAMP LEVEL
Q824 BUFFER
Q825,826 DC CLAMP
Q827,828 INVERT AMP
Q829,840 DC CLAMP
Q841-843 H/V MIX
Q844-846 H/V MIX
Q847,848 DC CLAMP
DIA PATTERN CENTER 1
DIA PATTERN CENTER 2
TP815
(See page 72.) TO JK-44 BOARD W122
(See page 72.) TO JK-44 BOARD W120
(See page 51, 54.) TO CA-16 BOARD (1/3)
+5V
-5V
GND
+9V
V IND
V IND
H IND
H IND
V BLNKING
H BLNKING
V D
IC801 TC4052BPHB H.V IND SELECT
IC802 TC4052BPHB H/V IND SELECT
IC803 TC4066BPHB WIP PTS ON/OFF SWITCH
IC804 IC805 TC74HC4538 DELAY
IC806 TC4053BPHB WIP PTC ON/OFF SWITCH
IC807 IC808 NJM4560D INTEGRATOR
CIRCLE PATTERN CENTER
CIRCLE PATTERN SHAPE
CIRCLE PATTERN SIZE
CN301
WIPE P.T C ●
WIPE P.T D ◆
WIPE P.T S ■
WIPE P.T H.C
WIPE P.T V.C
WIPE P.T V.C
WIPE P.T H.C
V BLNK
TO WF-1 BOARD(2/2) CN301 (See page 47.)
WIPE H
WIPE V
WIPE H
WIPE V
(See page 69.) TO MJ-22 BOARD W309
TO CA-16 BOARD(1/3) (See page 54.)
V BLNK
⑬
⑭
⑮
⑯
CA-16 BOARD (2/3)


7
8
9
10
11
12
13
14
15
Q809,810 INVERT AMP
Q811,812 DC CLAMP
Q813-815 H/V MIX
Q816-818 H/V̄ CLAMP
Q819,820 DC CLAMP
H RAMP LOW LEVEL
H,V RAMP CLAMP DC LEVEL
TP816
Q827,828 INVERT AMP
Q829,840 DC CLAMP
Q841-843 H/V MIX
Q844-846 H̄/V MIX
Q847,848 DC CLAMP
DIA PATTERN CENTER 1
DIA PATTERN CENTER 2
IC802
TC4052BPHB
H̄/V IND SELECT
IC803
TC4066BPHB
WIP PTS ON/OFF SWITCH
CN301
1 WIPE P.T C ●
2 WIPE P.T D ◆
3 WIPE P.T S ■
4 WIPE P.T H.C
5 WIPE P.T V.C
6 WIPE P.T V̄.C
7 WIPE P.T H̄.C
8 V BLNK
TO WF-1 BOARD(2/2) CN301
(See page 47.)
WIPE H J
WIPE V K
WIPE H̄ N
WIPE V̄ M
V BLNK R
TO CA-16 BOARD(1/3)
(See page 54.)
CIRCLE PATTERN SHAPE
RV810
IC807 IC808
NJM4560D
INTEGRATOR
CIRCLE PATTERN SIZE
⑯
⑮
CA-16 BOARD (2/3)


16
17
18
19
20
21
22
23
(See page 72.)
TO JK-44 BOARD W122
CN122 4P RED
LINE IN L 1
GND 2
GND 3
LINE IN R 4
(See page 72.)
TO JK-44 BOARD W120
CN120 4P BLK
SOURCE IN L 1
GND 2
GND 3
SOURCE IN R 4
IC608
M5113IL
SOURCE LEVEL CONTROL
IC609
M5113IL
LINE LEVEL CONT
IC606
NJM2043DD
MIX AMP
AUDIO LEVEL(L)
AUDIO LEVEL(R)
TP607
TP606
TP609
TPE010
TPE001
Q601
MIC POWER
(See page 69.)
TO MJ-22 BOARD W309
CN309 3P RED
(MIC IN) 1
GND 2
(MIC SW) 3
TP601
TPE007
TP602
IC601
NJM2043DD
MIC AMP
IC602
M5113IL
MIC LEVEL CONTROL
IC603
TC4053BPHB
MIC ON/OFF SWITCH


CN122 4P RED
LINE IN L
GND
GND
LINE IN R
TO JK-44 BOARD W122 (See page 72.)
CN120 4P BLK
SOURCE IN L
GND
GND
SOURCE IN R
TO JK-44 BOARD W120 (See page 72.)
IC608
M51131L
SOURCE LEVEL CONTROL
IC609
M51131L
LINE LEVEL CONTROL
IC606
NJM2043DD
MIX AMP
IC605
M51131L
FADER
IC601
NJM2043DD
MIC AMP
IC602
M51131L
MIC LEVEL CONTROL
IC603
TC4053BPHB
MIC ON/OFF SWITCH
IC604
NJM2043DD
BUFFER
Q601
MIC POWER
Q605,604
POWER ON MUTE
Q606,607
MUTE
Q602,603
POWER ON MUTE
AUDIO LEVEL (L)
AUDIO LEVEL (R)
MUTE SWITCH
POWER ON MUTE
+9V
TO CA-16 BOARD(1/3) (See page 51.)
CN310 RED
UNREG +6V
+6V
GND
-6V
UNREG -6V
TO PW-61 BOARD W310 (See page 76.)
CN312 RED
LIVE MIX REF
LIVE MIX CONT
SOURCE MIX REF
SOURCE MIX CONT
-6V
MIC REF
MIC CONT
TO AM-13 BOARD W312 (See page 69.)
CN313 YEL
FADER REF
FADER CONT
+6V
-6V
TO WF-1 BOARD (1/2) W313 (See page 42.)
CN121 RED
PROCESSED OUT L 2
PROCESSED OUT L 1
PROCESSED OUT L GND
PROCESSED OUT R GND
PROCESSED OUT R 1
PROCESSED OUT R 2
TO JK-44 BOARD W121 (See page 72.)
CN309 3P RED
MIC IN
GND
MIC SW
TO MJ-22 BOARD W309 (See page 69.)
TO WF-1 BOARD(2/2) CN301 (See page 47.)
TO CA-16 BOARD(1/3) (See page 54.)
CA-16 BOARD (3/3)
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
A
B
C
D
E
F
G
H
I
J

● Signal path

➡ : REC AUDIO Signal

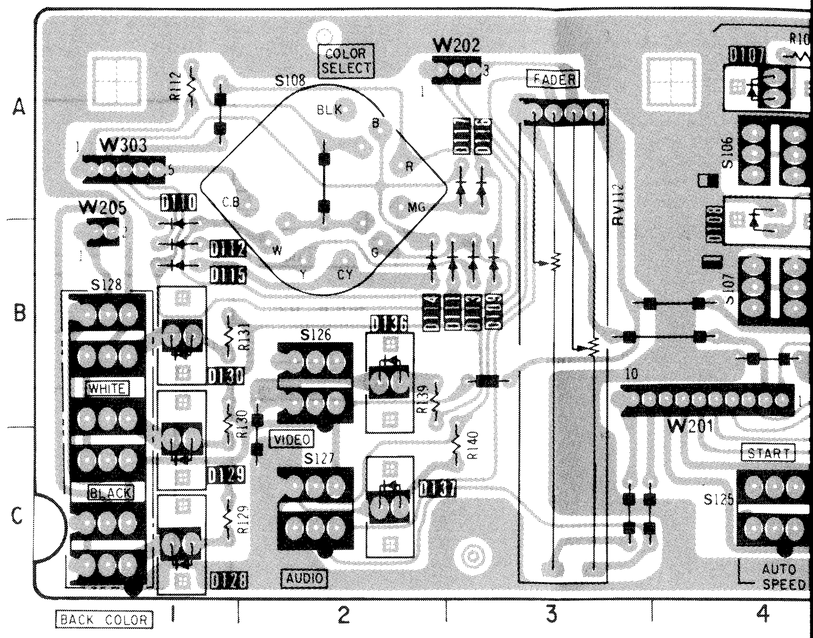
FT-39 (FUNCTION SW), FT-38 (VIDEO SW), JK-44 (VIDEO S TER

—Ref. No. FT-39 and JK-44 BOARDS : 4000 series, FT-38 and IS-5 BOA

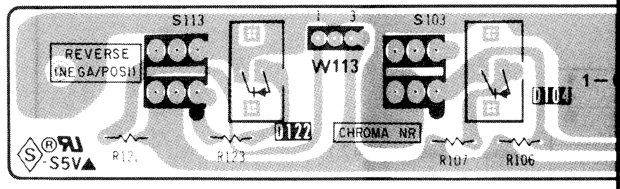
FT-39 BOARD

D101	C-5
D102	C-5
D105	B-5
D106	A-5
D107	A-4
D108	B-5
D109	B-3
D110	B-1
D111	B-2
D112	B-1
D113	B-3
D114	B-2
D115	B-1
D116	A-3
D117	A-3
D119	A-11
D120	A-12
D121	C-12
D123	A-6
D124	B-6
D126	C-6
D127	C-6
D128	C-1
D129	C-1
D130	C-1
D132	A-9
D133	A-10
D134	C-10
D135	C-4
D136	B-2
D137	C-2

FT-39 BOARD


A
B
C
1
2
3
4
COLOR SELECT
W202
FADER
S108
BLK
B
R
MG
G
CY
Y
W
CB
R112
W303
W205
D110
D112
D115
S128
WHITE
BLACK
BACK COLOR
D130
D129
D128
R131
R130
R129
S126
VIDEO
S127
AUDIO
D136
D137
R139
R140
RV112
S106
S107
D108
D107
W201
10
START
S125
AUTO SPEED

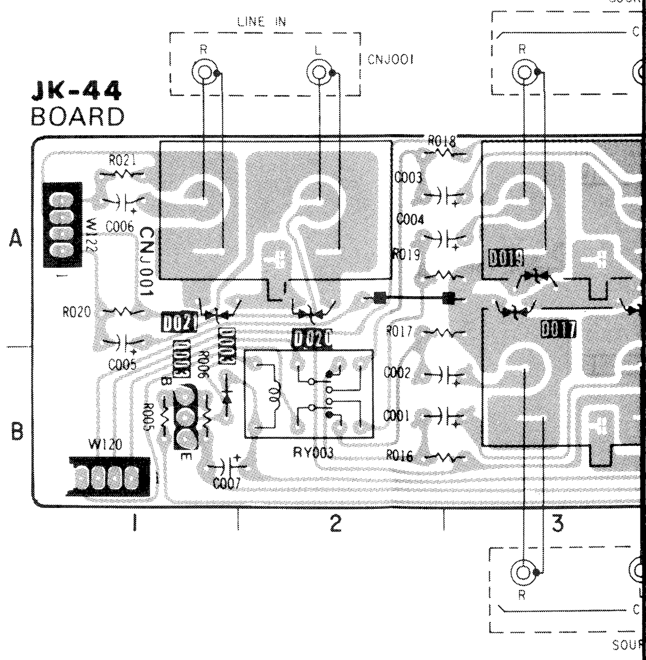
FT-38 BOARD


S113
REVERSE (NEGA/POSI)
W113
S103
D122
CHROMA NR
D104
R123
R107
R106
S5V▲

JK-44 BOARD

D001	A-6
D102	B-6
D103	A-1
D116	A-3
D017	A-3
D018	A-4
D019	A-3
D020	A-2
D021	A-1
D024	A-8
D025	A-8
D026	A-8
D027	A-8
D801	B-8
D802	B-8
D803	A-8
D804	A-8
Q001	A-6
Q002	B-6

JK-44 BOARD


LINE IN
R
L
CNJ001
A
B
1
2
3
W122
R021
C006
R020
C005
D021
D020
D103
D116
R006
R005
Q001
RY003
C007
W120
R018
C003
C004
R019
D019
R017
D017
C002
C001
R016

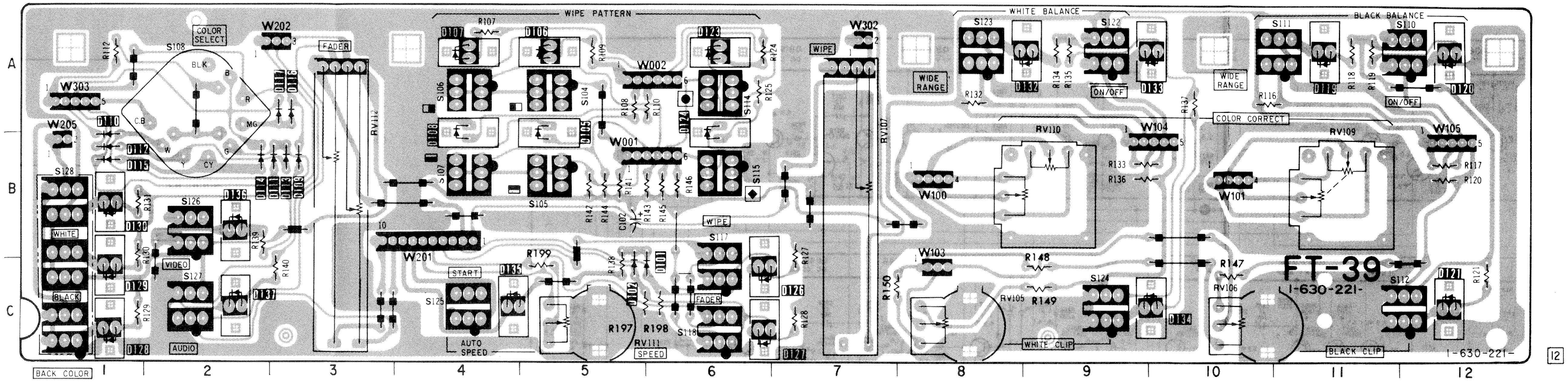
FT-39 (FUNCTION SW), FT-38 (VIDEO SW), JK-44 (VIDEO S TERMINAL), AM-13 (COLOR/AUDIO VR), IS-5 (EXT VIDEO INPUT), MJ-22 (LINE 2 INPUT)

—Ref. No. FT-39 and JK-44 BOARDS: 4000 series, FT-38 and IS-5 BOARDS: 5000 series, AM-13 BOARD: 6000 series, MJ-22 BOARD: 7000 series—

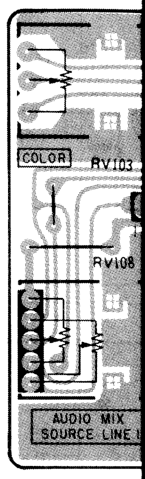
FT-39 BOARD

D101	C-5
D102	C-5
D105	B-5
D106	A-5
D107	A-4
D108	B-5
D109	B-3
D110	B-1
D111	B-2
D112	B-1
D113	B-3
D114	B-2
D115	B-1
D116	A-3
D117	A-3
D119	A-11
D120	A-12
D121	C-12
D123	A-6
D124	B-6
D126	C-6
D127	C-6
D128	C-1
D129	C-1
D130	C-1
D132	A-9
D133	A-10
D134	C-10
D135	C-4
D136	B-2
D137	C-2

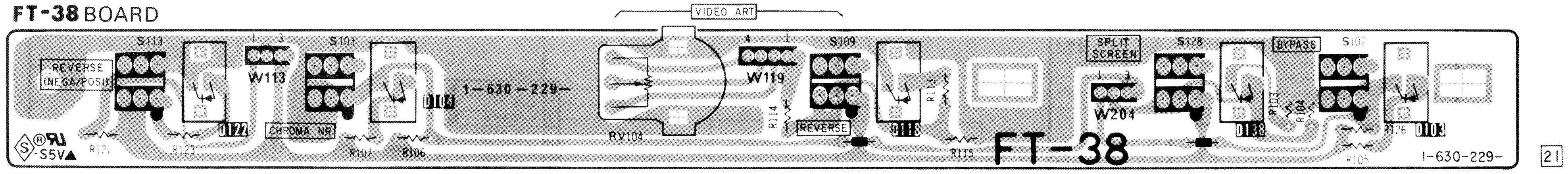
FT-39 BOARD


COLOR SELECT
W202
FADER
WIPE PATTERN
W302
WIPE
WHITE BALANCE
BLACK BALANCE
WIDE RANGE
ON/OFF
COLOR CORRECT
W303
W205
W002
W001
W104
W105
RV110
RV109
W100
W101
W201
W103
VIDEO
WHITE
BLACK
AUDIO
START
AUTO SPEED
SPEED
WHITE CLIP
BLACK CLIP
BACK COLOR
FT-39
1-630-221-
A
B
C
1
2
3
4
5
6
7
8
9
10
11
12

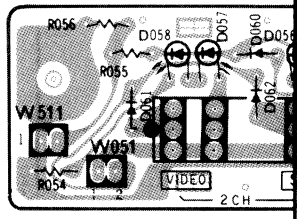
AM-13 BO


COLOR
RV103
RV108
AUDIO MIX
SOURCE LINE

FT-38 BOARD


VIDEO ART
REVERSE (NEGA/POSI)
W113
CHROMA NR
1-630-229-
W119
REVERSE
SPLIT SCREEN
W204
BYPASS
FT-38
S5V
1-630-229-

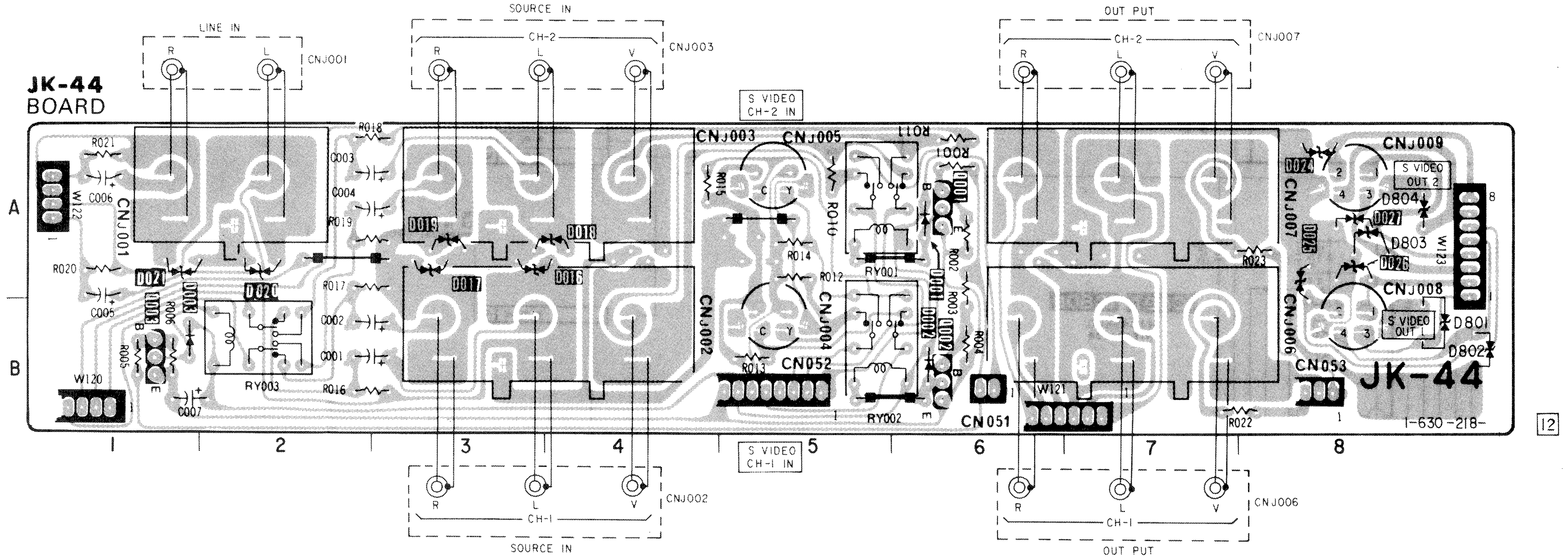
IS-5 BOARD


W511
W051
VIDEO
2CH

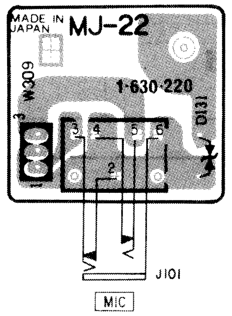
JK-44 BOARD

D001	A-6
D102	B-6
D103	A-1
D116	A-3
D017	A-3
D018	A-4
D019	A-3
D020	A-2
D021	A-1
D024	A-8
D025	A-8
D026	A-8
D027	A-8
D801	B-8
D802	B-8
D803	A-8
D804	A-8
Q001	A-6
Q002	B-6

JK-44 BOARD

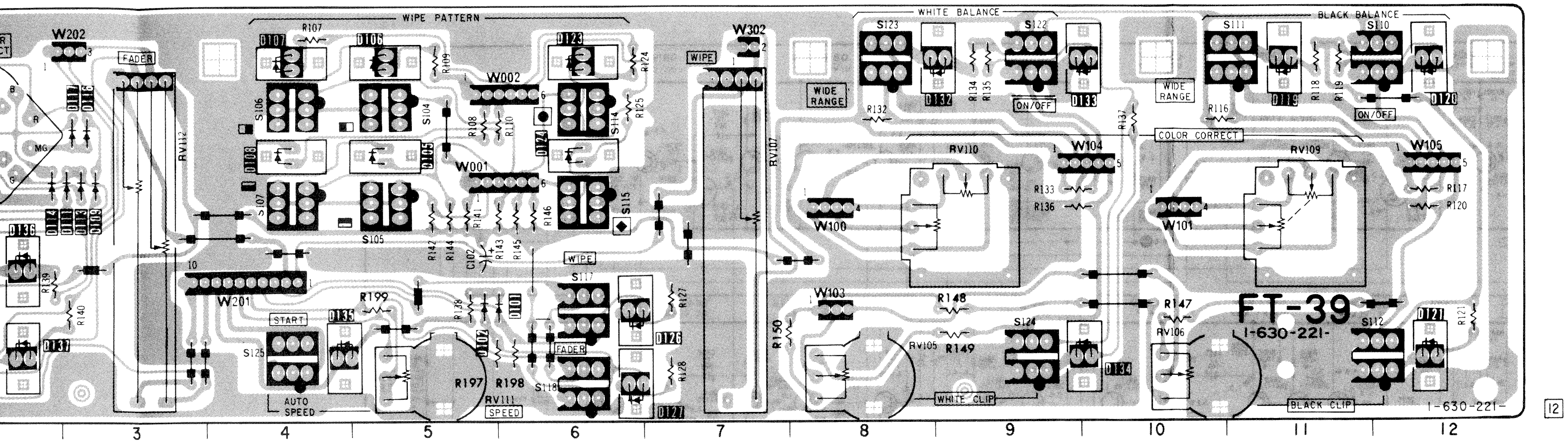

LINE IN
CNJ001
SOURCE IN
CH-2
CNJ003
S VIDEO CH-2 IN
OUT PUT
CNJ007
CNJ009
S VIDEO OUT 2
CNJ008
S VIDEO OUT 1
RY001
RY002
RY003
W120
W121
CN052
CN051
CN053
JK-44
1-630-218-
S VIDEO CH-1 IN
CNJ002
CH-1
CNJ006
A
B
1
2
3
4
5
6
7
8

MJ-22 BOARD

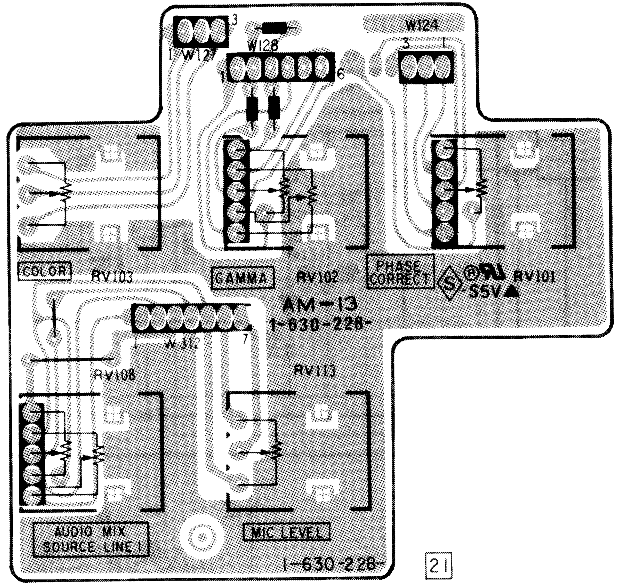

MADE IN JAPAN
MJ-22
1-630-220
W309
J101
MIC

-38 (VIDEO SW), JK-44 (VIDEO S TERMINAL), AM-13 (COLOR/AUDIO VR), IS-5 (EXT VIDEO INPUT), MJ-22 (LINE 2 INPUT)

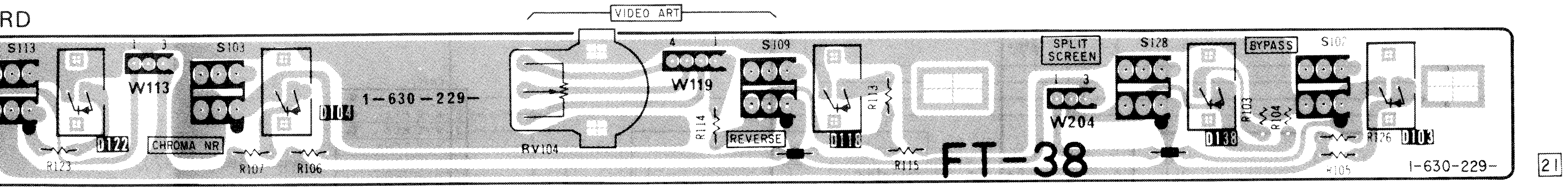
OARDS: 4000 series, FT-38 and IS-5 BOARDS: 5000 series, AM-13 BOARD: 6000 series, MJ-22 BOARD: 7000 series—


WIPE PATTERN
WHITE BALANCE
BLACK BALANCE
FADER
WIDE RANGE
ON/OFF
COLOR CORRECT
WIPE
START
AUTO SPEED
SPEED
WHITE CLIP
BLACK CLIP
FT-39
1-630-221-
12

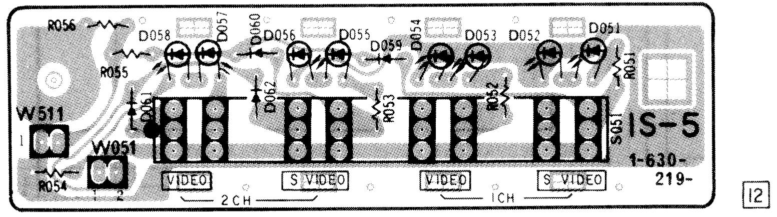
AM-13 BOARD

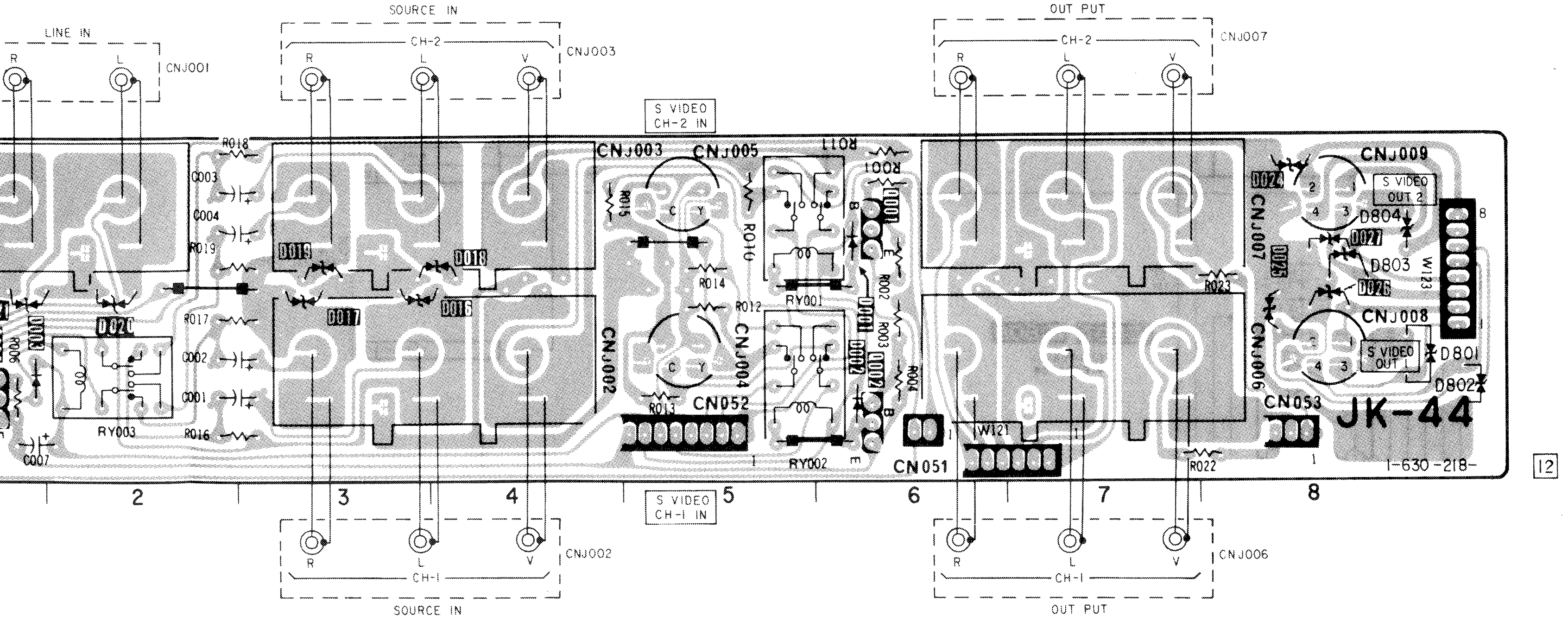

COLOR
GAMMA
PHASE CORRECT
AM-13
1-630-228-
AUDIO MIX SOURCE LINE I
MIC LEVEL
21

RD

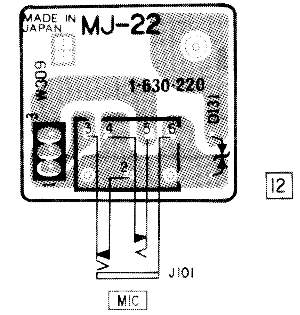

VIDEO ART
CHROMA NR
REVERSE
SPLIT SCREEN
BYPASS
FT-38
1-630-229-
21

IS-5 BOARD


VIDEO
S VIDEO
2 CH
1CH
IS-5
1-630-219-
12

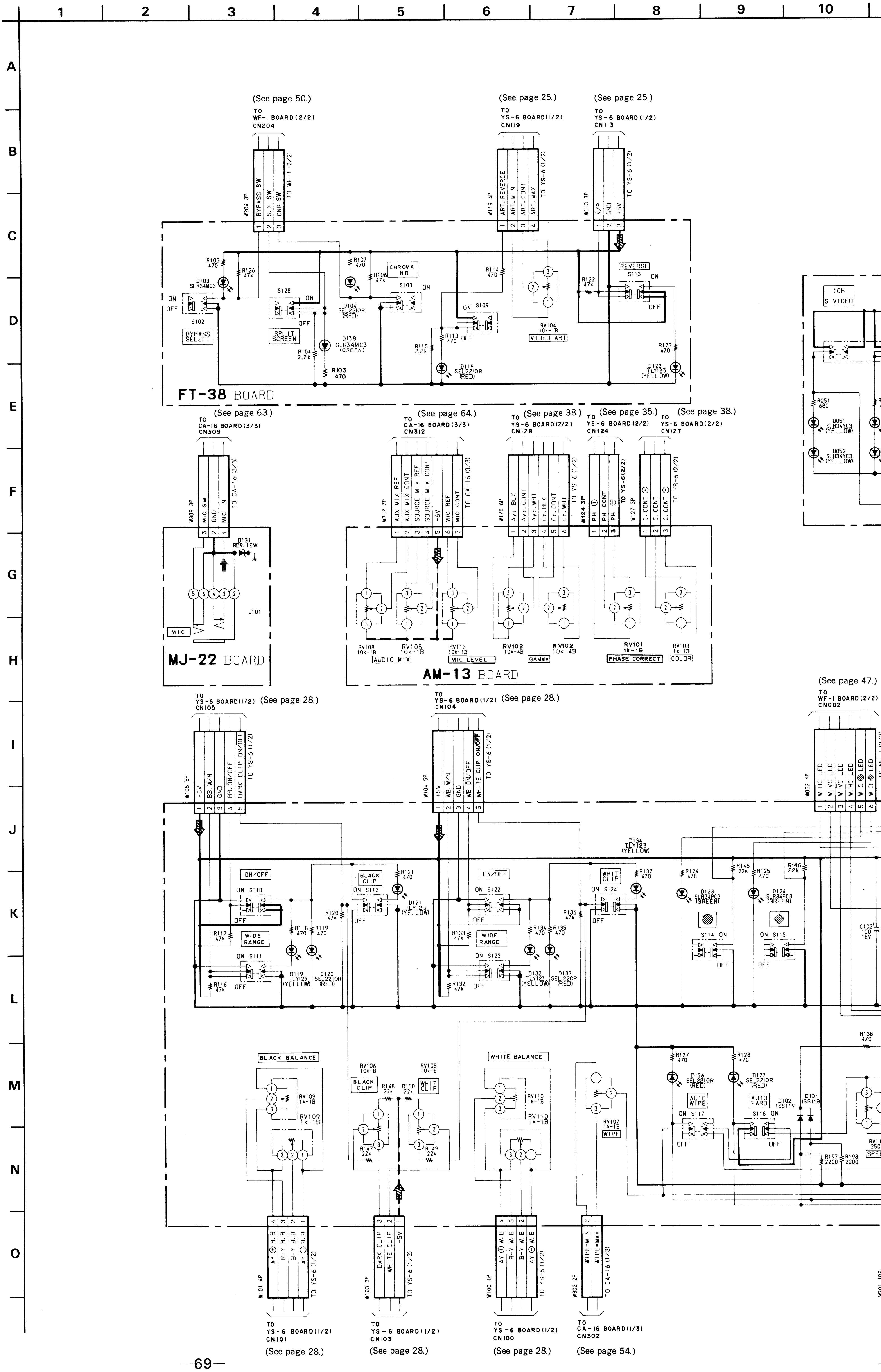

LINE IN
SOURCE IN
CH-2
CH-1
OUT PUT
S VIDEO CH-2 IN
S VIDEO CH-1 IN
S VIDEO OUT 2
S VIDEO OUT
JK-44
1-630-218-
12

MJ-22 BOARD


MADE IN JAPAN
MJ-22
1-630-220
MIC
12

FT-39 (FUNCTION SW), FT-38 (VIDEO SW), JK-44 (VIDEO S TERMINAL), AM-13 (COLOR/AUDIO VR), IS-5 (EXT VIDEO INPUT), MJ-22 (LINE 2 INPUT) SCHEMATIC

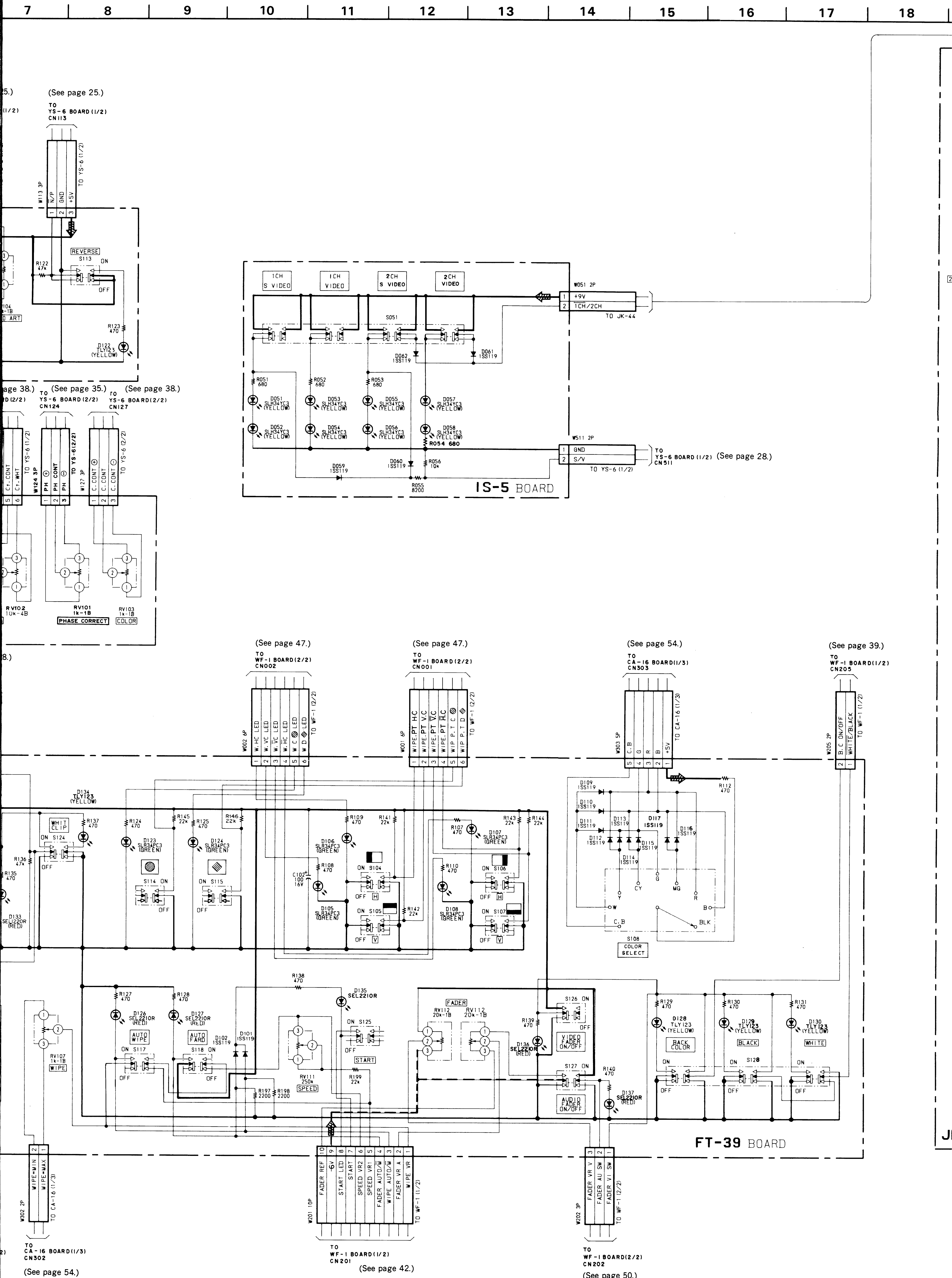
—Ref. No. FT-39 and JK-44 BOARDS: 4000 series, FT-38 and IS-5 BOARDS: 5000 series, AM-13 BOARD: 6000 series, MJ-22 BOARD: 7000 series—



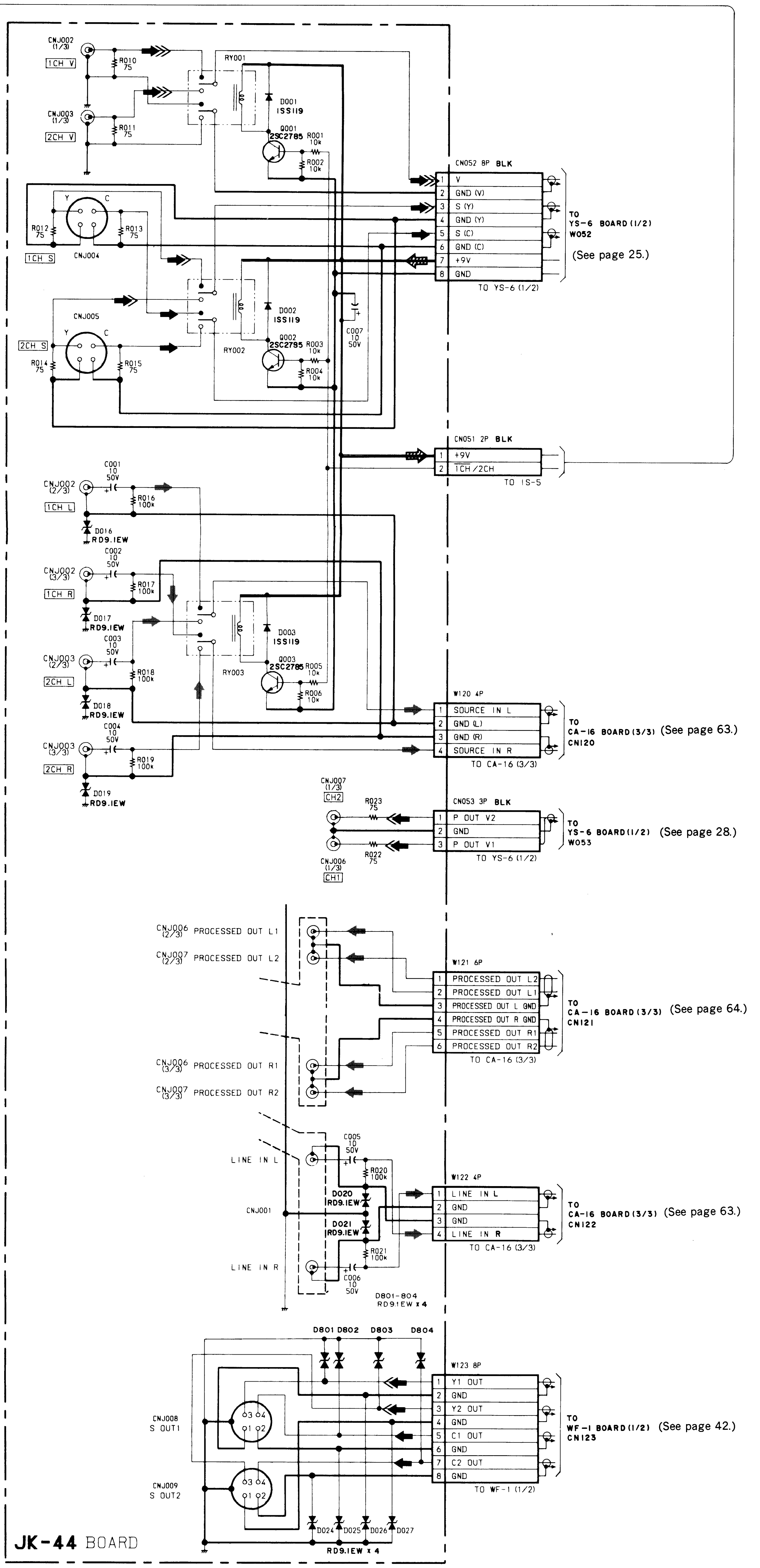
1 2 3 4 5 6 7 8 9 10
A B C D E F G H I J K L M N O
(See page 50.) TO WF-1 BOARD (2/2) CN204
W204 3P BYPASS SW S.S SW CNR SW TO WF-1 (2/2)
(See page 25.) TO YS-6 BOARD (1/2) CN119
W119 4P ART. REVERCE ART. MIN ART. CONT ART. MAX TO YS-6 (1/2)
(See page 25.) TO YS-6 BOARD (1/2) CN113
W113 3P N/P GND +5V TO YS-6 (1/2)
R105 470
R126 47k
D103 SLR34MC3
ON OFF S102
BYPASS SELECT
S128 ON OFF
SPLIT SCREEN
R107 470
R106 47k
CHROMA NR
S103 ON
D104 SEL2210R (RED)
D138 SLR34MC3 (GREEN)
R104 2.2k
R103 470
R114 470
ON S109
R113 470 OFF
R115 2.2k
D118 SEL2210R (RED)
RV104 10k-1B
VIDEO ART
R122 47k
REVERSE S113 ON OFF
R123 470
D122 TLY123 (YELLOW)
FT-38 BOARD
(See page 63.) TO CA-16 BOARD (3/3) CN309
W309 3P MIC SW GND MIC IN TO CA-16 (3/3)
D131 RD9.1EW
J101
MIC
MJ-22 BOARD
(See page 64.) TO CA-16 BOARD (3/3) CN312
W312 7P AUX MIX REF AUX MIX CONT SOURCE MIX REF SOURCE MIX CONT -6V MIC REF MIC CONT TO CA-16 (3/3)
(See page 38.) TO YS-6 BOARD (2/2) CN128
W128 6P ΔY↑.BLK ΔY↑.CONT ΔY↑.WHT C↑.BLK C↑.CONT C↑.WHT TO YS-6 (1/2)
(See page 35.) TO YS-6 BOARD (2/2) CN124
W124 3P PH ⊕ PH CONT PH ⊖ TO YS-6 (2/2)
(See page 38.) TO YS-6 BOARD (2/2) CN127
W127 3P C.CONT ⊕ C.CONT C.CONT ⊖ TO YS-6 (2/2)
RV108 10k-1B RV108 10k-1B AUDIO MIX
RV113 10k-1B MIC LEVEL
RV102 10k-4B RV102 10k-4B GAMMA
RV101 1k-1B PHASE CORRECT
RV103 1k-1B COLOR
AM-13 BOARD
1CH S VIDEO
R051 680
D051 SLH34YC3 (YELLOW)
D052 SLH34YC3 (YELLOW)
TO YS-6 BOARD (1/2) CN105 (See page 28.)
W105 5P +5V BB.W/N GND BB.ON/OFF DARK CLIP ON/OFF TO YS-6 (1/2)
TO YS-6 BOARD (1/2) CN104 (See page 28.)
W104 5P +5V WB.W/N GND WB.ON/OFF WHITE CLIP ON/OFF TO YS-6 (1/2)
(See page 47.) TO WF-1 BOARD (2/2) CN002
W002 6P W.HC LED W.VC LED W.VC LED W.HC LED W.C LED W.D LED
D134 TLY123 (YELLOW)
ON/OFF ON S110 OFF
R117 47k
WIDE RANGE
ON S111 OFF
R116 47k
R118 470 R119 470
D119 TLY123 (YELLOW) D120 SEL2210R (RED)
R120 47k
BLACK CLIP S112 ON OFF
R121 470
D121 TLY123 (YELLOW)
ON/OFF ON S122 OFF
R133 47k
WIDE RANGE
ON S123 OFF
R132 47k
R134 470 R135 470
D132 TLY123 (YELLOW) D133 SEL2210R (RED)
R136 47k
WHIT CLIP ON S124 OFF
R137 470
R124 470
R145 22k R125 470
R146 22k
D123 SLR34PC3 (GREEN)
D124 SLR34PC3 (GREEN)
S114 ON OFF
ON S115 OFF
C102 100 16V
BLACK BALANCE
RV109 1k-1B RV109 1k-1B
RV106 10k-B RV105 10k-B
BLACK CLIP R148 22k R150 22k WHIT CLIP
R147 22k R149 22k
WHITE BALANCE
RV110 1k-1B RV110 1k-1B
RV107 1k-1B WIPE
R127 470 R128 470
D126 SEL2210R (RED) D127 SEL2210R (RED)
AUTO WIPE ON S117 OFF
AUTO FARD S118 ON OFF
D102 1SS119 D101 1SS119
R197 2200 R198 2200
R138 470
W101 4P ΔY⊕B.B R-Y B.B B-Y B.B ΔY⊖B.B TO YS-6 (1/2)
W103 3P DARK CLIP WHITE CLIP -5V TO YS-6 (1/2)
W100 4P ΔY⊕W.B R-Y W.B B-Y W.B ΔY⊖W.B TO YS-6 (1/2)
W302 2P WIPE-MIN WIPE-MAX TO CA-16 (1/3)
TO YS-6 BOARD (1/2) CN101 (See page 28.)
TO YS-6 BOARD (1/2) CN103 (See page 28.)
TO YS-6 BOARD (1/2) CN100 (See page 28.)
TO CA-16 BOARD (1/3) CN302 (See page 54.)

R), IS-5 (EXT VIDEO INPUT), MJ-22 (LINE 2 INPUT) SCHEMATIC DIAGRAM

000 series, MJ-22 BOARD : 7000 series—



7
8
9
10
11
12
13
14
15
16
17
18
(See page 25.)
TO YS-6 BOARD (1/2) CN113
W113 3P
N/P
GND
+5V
TO YS-6 (1/2)
REVERSE
S113
ON
OFF
R122 47k
R123 470
D122 TLY123 (YELLOW)
(See page 35.)
TO YS-6 BOARD (2/2) CN124
(See page 38.)
TO YS-6 BOARD (2/2) CN127
W124 3P
PH ⊕
PH CONT
PH ⊖
TO YS-6 (2/2)
W127 3P
C. CONT ⊕
C. CONT
C. CONT ⊖
CT. CONT
CT. WHT
RV102 10k-4B
RV101 1k-1B
PHASE CORRECT
RV103 1k-1B
COLOR
1CH S VIDEO
1CH VIDEO
2CH S VIDEO
2CH VIDEO
S051
W051 2P
+9V
1CH/2CH
TO JK-44
D062 1SS119
D061 1SS119
R051 680
R052 680
R053 680
D051 SLH34YC3 (YELLOW)
D053 SLH34YC3 (YELLOW)
D055 SLH34YC3 (YELLOW)
D057 SLH34YC3 (YELLOW)
D052 SLH34YC3 (YELLOW)
D054 SLH34YC3 (YELLOW)
D056 SLH34YC3 (YELLOW)
D058 SLH34YC3 (YELLOW)
R054 680
W511 2P
GND
S/V
TO YS-6 (1/2)
TO YS-6 BOARD (1/2) CN511
(See page 28.)
D059 1SS119
D060 1SS119
R056 10k
R055 8200
IS-5 BOARD
(See page 47.)
TO WF-1 BOARD (2/2) CN002
W002 6P
W. HC LED
W. VC LED
W. VC LED
W. HC LED
W. C LED
W. D LED
TO WF-1 (2/2)
(See page 47.)
TO WF-1 BOARD (2/2) CN001
W001 6P
WIPE. PT HC
WIPE. PT VC
WIPE. PT VC
WIPE. PT HC
WIP. P. T C
WIP. P. T D
TO WF-1 (2/2)
(See page 54.)
TO CA-16 BOARD (1/3) CN303
W303 5P
C. B
G
R
B
+5V
TO CA-16 (1/3)
(See page 39.)
TO WF-1 BOARD (1/2) CN205
W205 2P
B. C ON/OFF
WHITE/BLACK
TO WF-1 (1/2)
D134 TLY123 (YELLOW)
WHIT CLIP
S124
ON
OFF
R137 470
R136 47k
R135 470
D133 SEL1220R (RED)
R124 470
R145 22k
R125 470
R146 22k
D123 SLR34PC3 (GREEN)
D124 SLR34PC3 (GREEN)
S114 ON
S115
R109 470
R141 22k
D106 SLR34PC3 (GREEN)
R108 470
C102 100 16V
S104
H
S105
V
D105 SLR34PC3 (GREEN)
R142 22k
R107 470
D107 SLR34PC3 (GREEN)
R143 22k
R144 22k
R110 470
S106
S107
D108 SLR34PC3 (GREEN)
R112 470
D109 1SS119
D110 1SS119
D111 1SS119
D112 1SS119
D113 1SS119
D117 1SS119
D116 1SS119
D115 1SS119
D114 1SS119
Y
CY
G
MG
R
W
B
C. B
BLK
S108
COLOR SELECT
R138 470
D135 SEL2210R
R127 470
R128 470
D126 SEL2210R (RED)
D127 SEL2210R (RED)
AUTO WIPE
AUTO FARD
S117
S118 ON
D102 1SS119
D101 1SS119
S125
START
RV111 250k
SPEED
R197 2200
R198 2200
R199 22k
FADER
RV112 20k-1B
RV112 20k-1B
R139 470
D136 SEL2210R (RED)
S126 ON
VIDEO FADER ON/OFF
S127 ON
AUDIO FADER ON/OFF
R140 470
D137 SEL2210R (RED)
R129 470
D128 TLY123 (YELLOW)
BACK COLOR
R130 470
D129 TLY123 (YELLOW)
BLACK
S128
R131 470
D130 TLY123 (YELLOW)
WHITE
RV107 1k-1B
WIPE
FT-39 BOARD
W302 2P
WIPE=MIN
WIPE=MAX
TO CA-16 (1/3)
TO CA-16 BOARD (1/3) CN302
(See page 54.)
W201 10P
FADER REF
-6V
START LED
START
SPEED VR2
SPEED VR1
FADER AUTO/M
WIPE AUTO/M
FADER VR A
WIPE VR
TO WF-1 (1/2)
TO WF-1 BOARD (1/2) CN201
(See page 42.)
W202 3P
FADER VR V
FADER AU SW
FADER VI SW
TO WF-1 (2/2)
TO WF-1 BOARD (2/2) CN202
(See page 50.)


CNJ002 (1/3)
1CH V
R010 75
RY001
D001 1SS119
Q001 2SC2785
R001 10k
R002 10k
CNJ003 (1/3)
2CH V
R011 75
Y
C
R012 75
R013 75
1CH S
CNJ004
CNJ005
2CH S
R014 75
R015 75
D002 1SS119
Q002 2SC2785
R003 10k
R004 10k
RY002
C007 10 50V
CN052 8P BLK
1 V
2 GND (V)
3 S (Y)
4 GND (Y)
5 S (C)
6 GND (C)
7 +9V
8 GND
TO YS-6 (1/2)
TO YS-6 BOARD (1/2) W052
(See page 25.)
CN051 2P BLK
1 +9V
2 1CH/2CH
TO IS-5
C001 10 50V
CNJ002 (2/3)
1CH L
R016 100k
D016 RD9.1EW
C002 10 50V
CNJ002 (3/3)
1CH R
R017 100k
D017 RD9.1EW
C003 10 50V
CNJ003 (2/3)
2CH L
R018 100k
D018 RD9.1EW
C004 10 50V
CNJ003 (3/3)
2CH R
R019 100k
D019 RD9.1EW
D003 1SS119
Q003 2SC2785
R005 10k
R006 10k
RY003
W120 4P
1 SOURCE IN L
2 GND (L)
3 GND (R)
4 SOURCE IN R
TO CA-16 (3/3)
TO CA-16 BOARD (3/3) CN120
(See page 63.)
CNJ007 (1/3)
CH2
R023 75
CNJ006 (1/3)
CH1
R022 75
CN053 3P BLK
1 P OUT V2
2 GND
3 P OUT V1
TO YS-6 (1/2)
TO YS-6 BOARD (1/2) W053
(See page 28.)
CNJ006 (2/3) PROCESSED OUT L1
CNJ007 (2/3) PROCESSED OUT L2
CNJ006 (3/3) PROCESSED OUT R1
CNJ007 (3/3) PROCESSED OUT R2
W121 6P
1 PROCESSED OUT L2
2 PROCESSED OUT L1
3 PROCESSED OUT L GND
4 PROCESSED OUT R GND
5 PROCESSED OUT R1
6 PROCESSED OUT R2
TO CA-16 (3/3)
TO CA-16 BOARD (3/3) CN121
(See page 64.)
LINE IN L
CNJ001
LINE IN R
C005 10 50V
R020 100k
D020 RD9.1EW
D021 RD9.1EW
R021 100k
C006 10 50V
D801-804 RD9.1EW x 4
W122 4P
1 LINE IN L
2 GND
3 GND
4 LINE IN R
TO CA-16 (3/3)
TO CA-16 BOARD (3/3) CN122
(See page 63.)
D801 D802 D803 D804
CNJ008 S OUT1
CNJ009 S OUT2
3 4
1 2
W123 8P
1 Y1 OUT
2 GND
3 Y2 OUT
4 GND
5 C1 OUT
6 GND
7 C2 OUT
8 GND
TO WF-1 (1/2)
TO WF-1 BOARD (1/2) CN123
(See page 42.)
D024 D025 D026 D027
RD9.1EW x 4
JK-44 BOARD

- **Signal path**

➡≫ : REC Y Signal

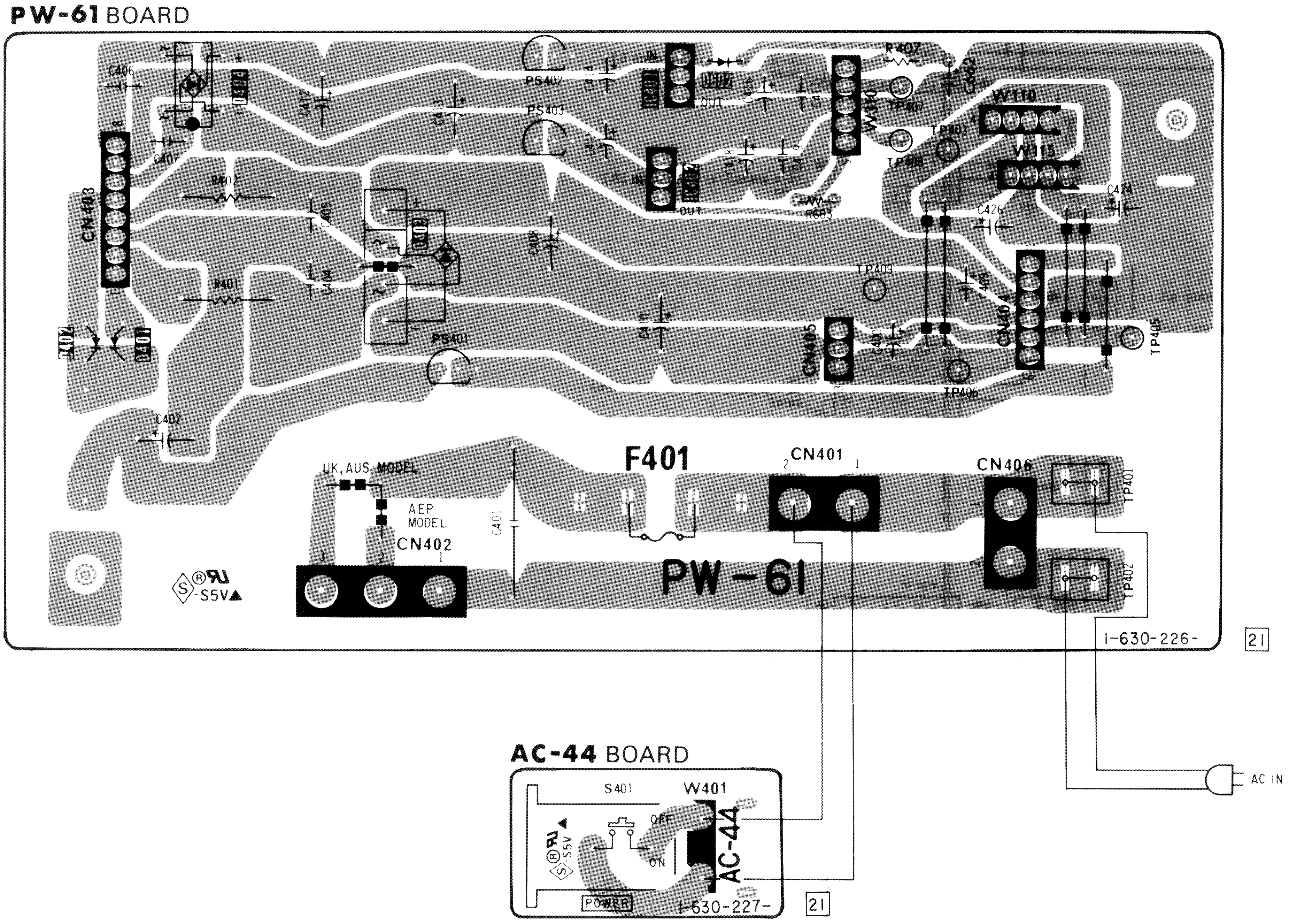
➡ : REC CHROMA Signal

➡≫ : REC Y/CHROMA Signal

➡ : REC AUDIO Signal

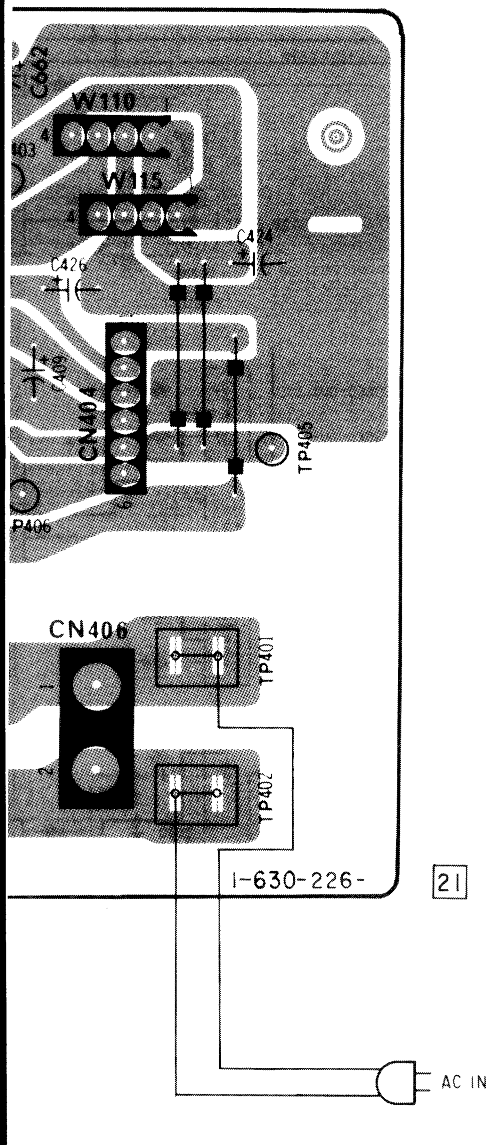
AC-44 (POWER SW), PT-68 (DC/DC CONVERTER), PT-70 (DC/DC CONVERTER), PW-61 (POWER SUPPLY) PRINTED WIRING BOARD

—Ref. No. PT-68BOARD : 4000 series, AC-44 BOARD : 5000 series, PW-61 BOARD : 6000 series, PT-70 BOARD : 7000 series—

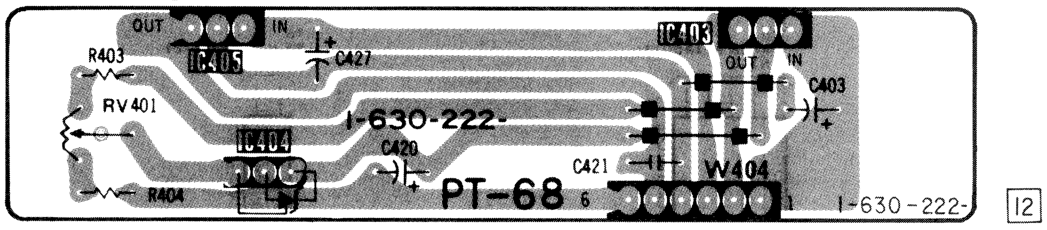

PW-61 BOARD
C406
D404
C412
C413
PS402
PS403
C414
C415
IN
IC401
D602
OUT
C416
C417
R407
C662
W310
TP407
TP403
TP408
W110
W115
C424
C426
C407
R402
CN403
C405
D403
C408
IN
IC402
OUT
C418
C419
R663
TP409
C409
CN404
R401
C404
C410
CN405
C400
TP406
TP405
D402
D401
PS401
C402
UK, AUS MODEL
AEP MODEL
CN402
C401
F401
CN401
CN406
TP401
TP402
PW-61
S5V▲
1-630-226-
21
AC-44 BOARD
S401
W401
OFF
ON
AC-44
S5V▲
POWER
1-630-227-
21
AC IN

PT-6
PT-7
PT-70
C422
C423

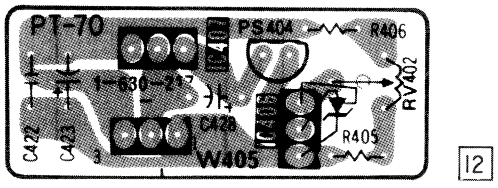
VIRING BOARD


C662
W110
1
4
403
W115
4
C424
C426
409
CN404
6
TP405
P406
CN406
1
2
TP401
TP402
1-630-226-
21
AC IN

PT-68 BOARD


OUT
IN
IC405
C427
R403
RV401
IC404
1-630-222-
C420
R404
PT-68
6
C421
W404
1
IC403
OUT
IN
C403
1-630-222-
12

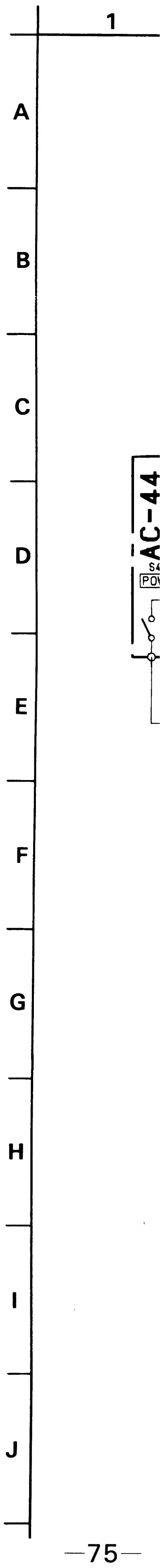
PT-70 BOARD


PT-70
IC407
PS404
R406
1-630-217
RV402
C428
IC406
C422
C423
3
W405
R405
12

POWER SUPPLY

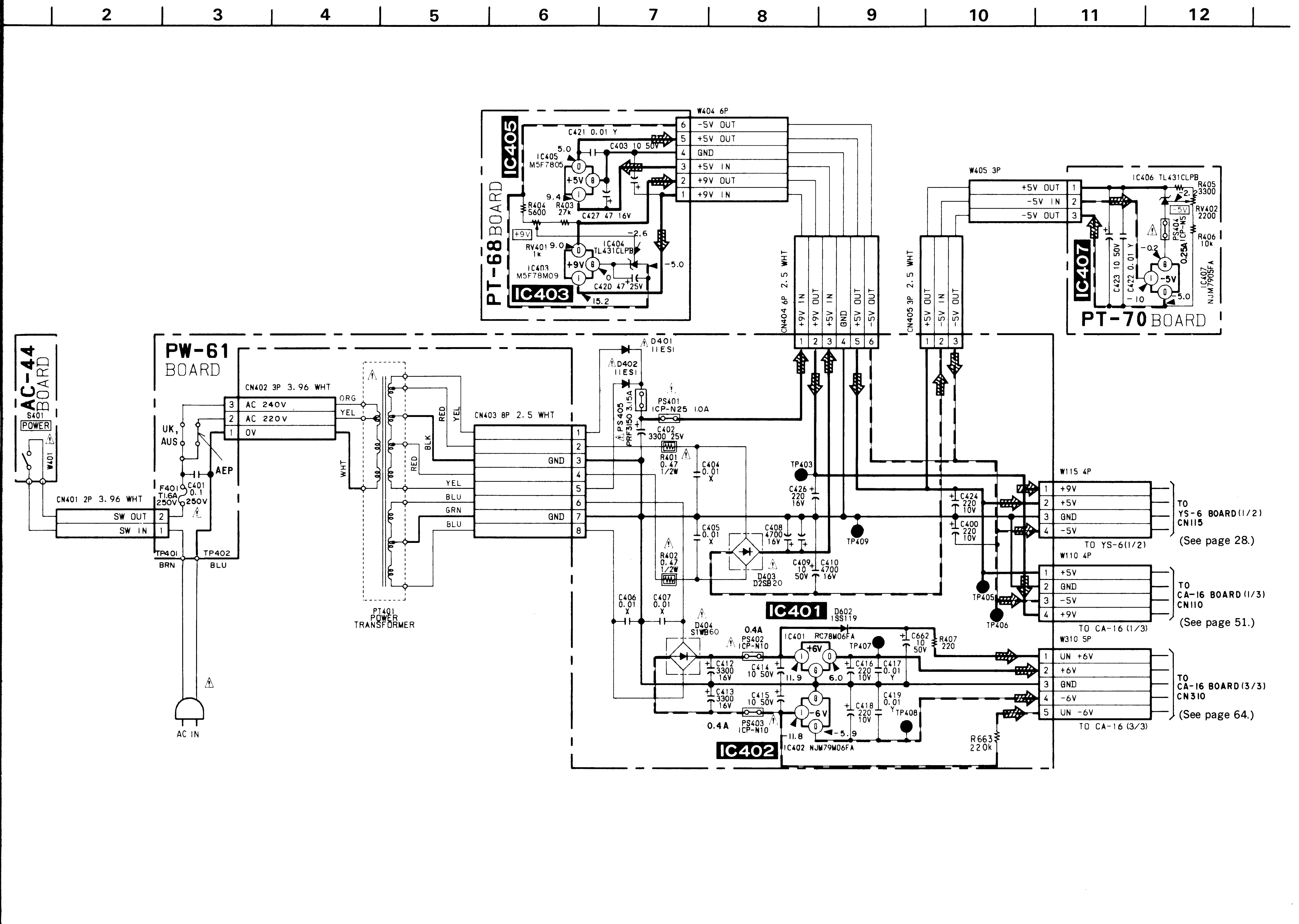
AC-44 (POWE

—Ref. No. PT-(


1
A
B
C
D
E
F
G
H
I
J
AC-44
S4
POV

OWER SW), PT-68 (DC/DC CONVERTER), PT-70 (DC/DC CONVERTER), PW-61 (POWER SUPPLY) SCHEMATIC DIAGRAM

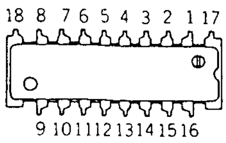
PT-68BOARD : 4000 series, AC-44 BOARD : 5000 series, PW-61 BOARD : 6000 series, PT-70 BOARD : 7000 series—



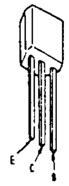
2
3
4
5
6
7
8
9
10
11
12
PT-68 BOARD
IC405
IC403
W404 6P
-5V OUT
+5V OUT
GND
+5V IN
+9V OUT
+9V IN
C421 0.01 Y
C403 10 50V
IC405 M5F7805
R404 5600
R403 27k
C427 47 16V
RV401 1k
IC404 TL431CLPB
IC403 M5F78M09
C420 47 25V
PT-70 BOARD
IC407
W405 3P
+5V OUT
-5V IN
-5V OUT
IC406 TL431CLPB
R405 3300
RV402 2200
R406 10k
PS404 ICP-N5 0.25A
C423 10 50V
C422 0.01 Y
IC407 NJM7905FA
AC-44 BOARD
S401 POWER
W401
CN401 2P 3.96 WHT
SW OUT
SW IN
PW-61 BOARD
CN402 3P 3.96 WHT
AC 240V
AC 220V
0V
UK, AUS
AEP
F401 T1.6A 250V
C401 0.1 250V
TP401 BRN
TP402 BLU
AC IN
PT401 POWER TRANSFORMER
ORG
YEL
WHT
RED
BLK
GRN
BLU
CN403 8P 2.5 WHT
GND
CN404 6P 2.5 WHT
+9V IN
+9V OUT
+5V IN
GND
+5V OUT
-5V
CN405 3P 2.5 WHT
+5V OUT
-5V IN
-5V OUT
D401 11ES1
D402 11ES1
PS405 PRF3150 3.15A
PS401 ICP-N25 10A
C402 3300 25V
R401 0.47 1/2W
C404 0.01 X
R402 0.47 1/2W
C405 0.01 X
C406 0.01 X
C407 0.01 X
TP403
C426 220 16V
C408 4700 16V
C409 10 50V
C410 4700 16V
D403 D2SB20
TP409
C424 220 10V
C400 220 10V
IC401
D602 1SS119
D404 S1WB60
PS402 ICP-N10 0.4A
IC401 RC78M06FA
TP407
C662 10 50V
R407 220
C412 3300 16V
C414 10 50V
C416 220 10V
C417 0.01 Y
C413 3300 16V
C415 10 50V
C418 220 10V
C419 0.01
TP408
PS403 ICP-N10 0.4A
IC402
IC402 NJM79M06FA
R663 220k
TP405
TP406
W115 4P
+9V
+5V
GND
-5V
TO YS-6 BOARD (1/2) CN115
TO YS-6 (1/2)
(See page 28.)
W110 4P
+5V
GND
-5V
+9V
TO CA-16 BOARD (1/3) CN110
TO CA-16 (1/3)
(See page 51.)
W310 5P
UN +6V
+6V
GND
-6V
UN -6V
TO CA-16 BOARD (3/3) CN310
TO CA-16 (3/3)
(See page 64.)

4-3. SEMICONDUCTORS

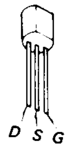
HA1141


18 8 7 6 5 4 3 2 1 17
9 10 11 12 13 14 15 16

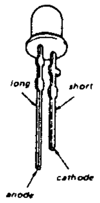
DTA114ES
DTC114ES
DTC143TS
2SA1048
2SC2458



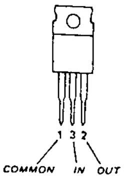
2SK523



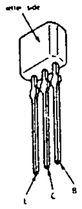
SLH-34YC3


long
short
cathode
anode

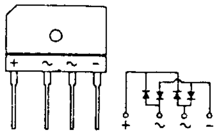
M5F78M09
M5F7805
NJM79M05FA
NJM79M06FA
NJM7905FA
RC78M06FA


1 3 2
COMMON
IN
OUT

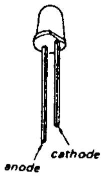
2SC2785-HFE


white side
E
C
B

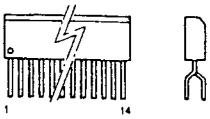
D2SB20



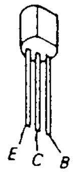
SLR-34MC3


cathode
anode

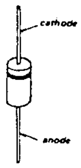
M51131L



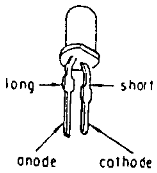
2SA733-K



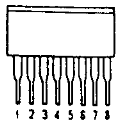
RD3.9E-B2
RD9.1E-B2


cathode
anode

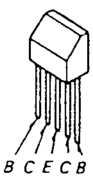
SLR-34PC3
SEL2210R
TLY123


long
short
onode
cothode

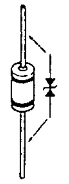
M51848L



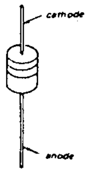
2SA979
2SC2259-F



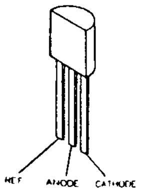
RD9.1EW



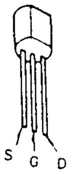
1SS119
1SS148
11ES2


cathode
anode

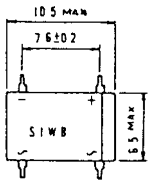
TL431CLPB


REF
ANODE
CATHODE

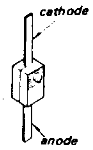
2SK105A-10



S1WB60


10.5 MAX
7.6±0.2
- +
S1WB
~ ~
6.5 MAX

1T25


cathode
anode

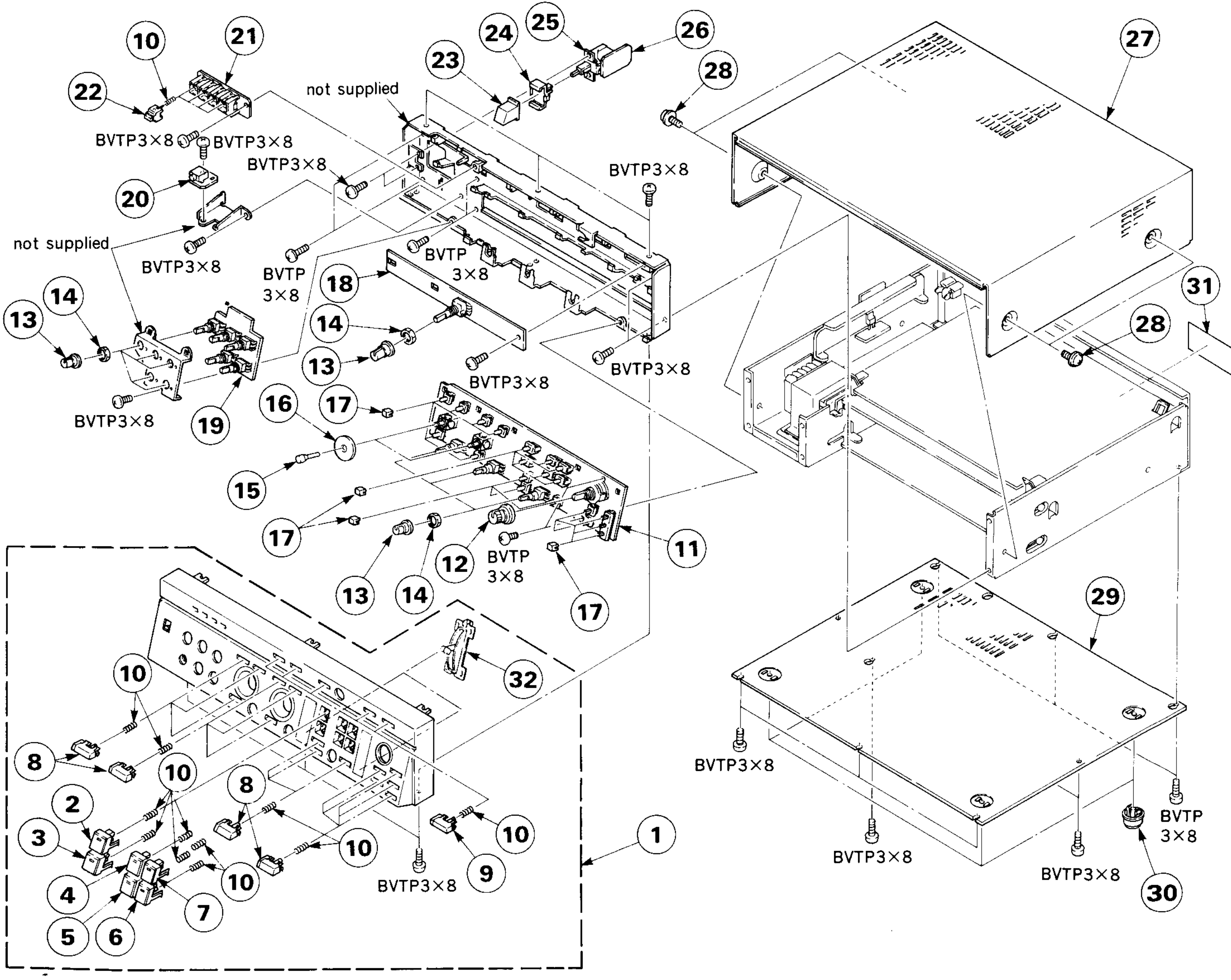
SECTION 5
EXPLODED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
  Example:
  (RED) . . . KNOB, BALANCE (WHITE)
  ↑ ↑
  Cabinet's Color Parts' Color

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

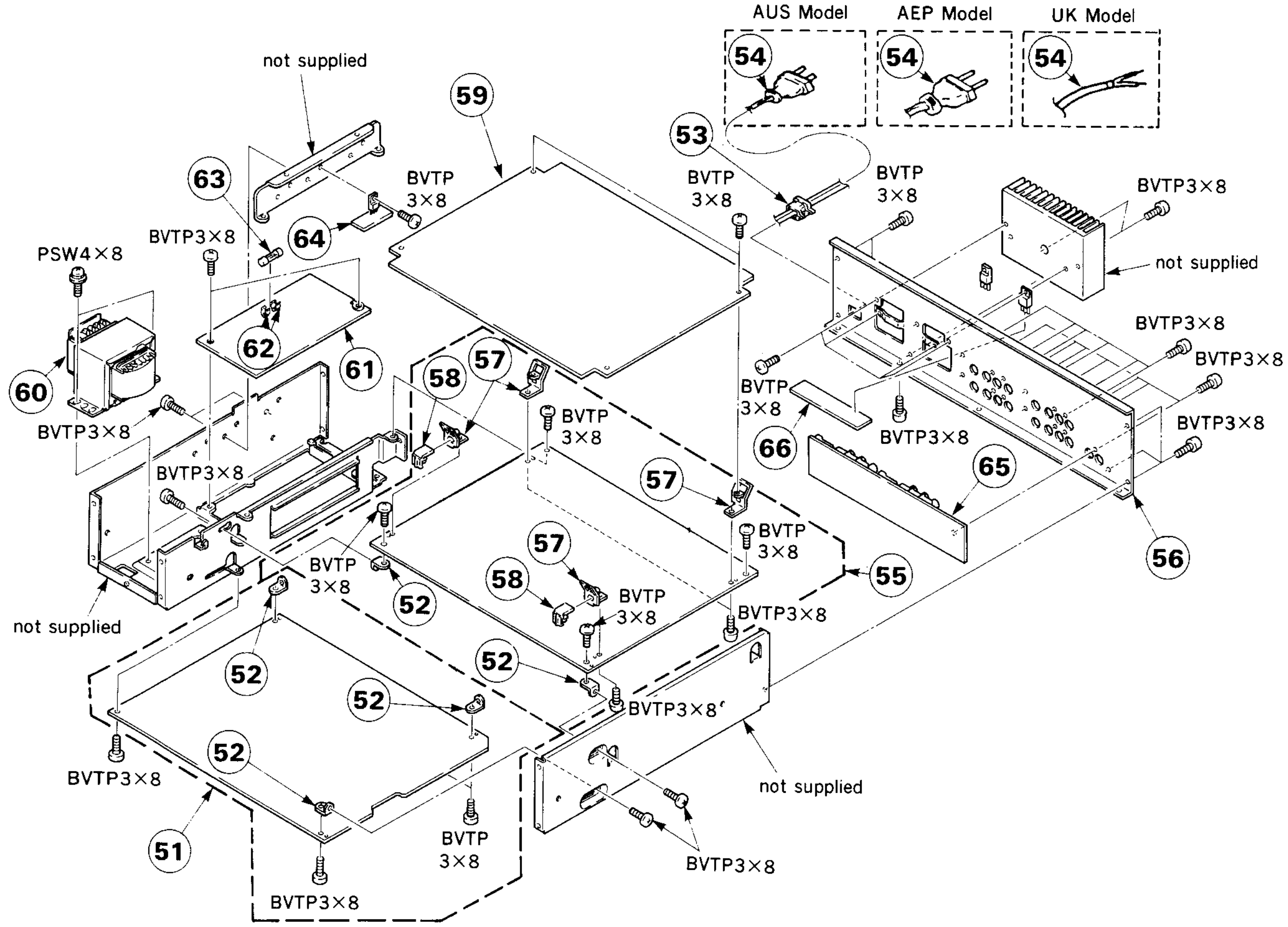
5-1. CABINET, FRONT PANEL ASSEMBLIES



10
21
22
BVTP3×8
BVTP3×8
BVTP3×8
not supplied
23
24
25
26
28
27
BVTP3×8
20
not supplied
BVTP3×8
BVTP 3×8
BVTP 3×8
18
14
13
14
13
19
BVTP3×8
BVTP3×8
BVTP3×8
16
17
15
17
17
12
BVTP 3×8
11
13
14
17
31
28
29
32
10
8
10
2
3
8
10
10
10
4
7
5
6
9
BVTP3×8
1
BVTP3×8
BVTP3×8
BVTP3×8
BVTP 3×8
30

No.	Part No.	Description	Remark
1	X-2118-237-1	PANEL ASSY, FRONT	2-10, 32
2	X-2118-230-1	PUSH BUTTON (C) ASSY	
3	X-2118-229-1	PUSH BUTTON (D) ASSY	
4	X-2118-208-1	PUSH BUTTON (S-0) ASSY	
5	X-2118-210-1	PUSH BUTTON (S-2) ASSY	
6	X-2118-211-1	PUSH BUTTON (S-3) ASSY	
7	X-2118-209-1	PUSH BUTTON (S-1) ASSY	
8	X-2118-205-1	PUSH BUTTON (SL) ASSY	
9	X-2118-204-1	PUSH BUTTON (FL) ASSY	
10	2-217-533-00	SPRING, COMPRESSION	
11	*A-7070-849-A	FT-39 BOARD, COMPLETE	
12	X-2118-214-1	KNOB (L) ASSY, VOL	
13	X-2118-215-1	KNOB (S) ASSY, VOL	
14	2-118-268-01	NUT (M9), HEXAGON	
15	2-128-426-01	GRIP	
16	2-118-243-11	SHEET, JOY STICK	
17	2-118-220-01	JOINT	
18	*1-630-229-21	FT-38 BOARD	
19	*1-630-228-21	AM-13 BOARD	
20	*1-630-220-12	MJ-22 BOARD	
21	*1-630-219-12	IS-5 BOARD	
22	X-2118-231-1	BUTTON (I-S) ASSY	
23	2-118-215-01	BUTTON (POWER)	
24	2-118-218-01	JOINTER	
25	⚠.1-553-318-13	SWITCH, PUSH (AC POWER) (1 KEY) (S401)	
26	*1-630-227-21	AC-44 BOARD	
27	2-382-698-01	CASE, UPPER	
28	4-847-802-00	SCREW, CASE	
29	*2-382-694-01	PLATE, BOTTOM	
30	X-3701-069-0	FOOT ASSY, M.F	
31	*2-128-447-01	LABEL, MODEL NUMBER (UK/AUS MODEL)	
	*2-128-448-01	LABEL, MODEL NUMBER (AEP MODEL)	
32	X-2118-236-1	LEVER ASSY, FADER	

5-2. MAIN BOARD ASSEMBLY



AUS Model
AEP Model
UK Model
54
54
54
53
not supplied
59
63
64
BVTP 3×8
BVTP3×8
PSW4×8
BVTP 3×8
BVTP 3×8
BVTP3×8
not supplied
BVTP3×8
BVTP3×8
BVTP3×8
62
61
60
58
57
BVTP 3×8
BVTP 3×8
BVTP3×8
BVTP3×8
66
65
56
57
BVTP 3×8
55
57
58
BVTP 3×8
BVTP3×8
52
BVTP 3×8
not supplied
52
52
52
BVTP3×8
52
BVTP3×8
51
BVTP 3×8
BVTP3×8
not supplied
BVTP3×8

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

No.	Part No.	Description	Remark
51	*A-7061-748-A	YS-6 BOARD, COMPLETE	52
52	*2-382-687-11	HOLDER (2), PC BOARD	
53	⚠.3-703-244-02	BUSHING (2104), CORD	
54	⚠.1-534-817-31	CORD, POWER (AEP MODEL)	
	⚠.1-551-732-11	CORD, POWER (AUS MODEL)	
54	⚠.1-551-884-32	CORD, POWER (UK MODEL)	
55	*A-7061-749-A	WF-1 BOARD, COMPLETE	52, 57, 58
56	2-128-439-21	PLATE, JACK	
57	*2-128-437-01	HOLDER (3), PC BOARD	
58	*3-710-565-01	HINGE, PC BOARD	
59	*A-7061-750-A	CA-16 BOARD, COMPLETE	
60	⚠.1-449-826-11	TRANSFORMER, POWER	
61	*A-7061-751-A	PW-61 BOARD, COMPLETE (AEP MODEL)	62
	*A-7061-835-A	PW-61 BOARD, COMPLETE (UK/AUS MODEL)	62
62	⚠.1-533-189-11	HOLDER, FUSE	
63	⚠.1-532-259-00	FUSE, TIME-LAG	
64	*1-630-217-12	PT-70 BOARD	
65	*A-7070-842-A	JK-44 BOARD, COMPLETE	
66	*1-630-222-12	PT-68 BOARD	

XV-C900

PT-70 IS-5 FT-39

SECTION 6
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: μF, PF: μμF.

RESISTORS
- All resistors are in ohms.
- F: nonflammable

COILS
- MMH: mH, UH: μH

SEMICONDUCTORS
In each case, U: μ, for example:
UA...: μA..., UPA...: μPA...,
UPC...: μPC, UPD...: μPD...

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description				Remark
	*1-630-217-12	PT-70 BOARD ************				
	7-685-645-79	SCREW +BVTP	3X6	TYPE2 IT-3		
	7-685-646-79	SCREW +BVTP	3X8	TYPE2 IT-3		
		CAPACITOR				
C422	1-161-379-00	CERAMIC	0.01MF	30%	16V	
C423	1-123-875-11	ELECT	10MF	20%	50V	
		IC				
IC406	8-759-914-44	IC TL431CLPB				
IC407	8-759-701-84	IC NJM7905FA				
		IC LINK				
PS404⚠	1-532-727-11	LINK, IC (ICP-N5) 0.25A				
		RESISTOR				
R405	1-249-423-11	CARBON	3.3K	5%	1/4W	
R406	1-249-429-11	CARBON	10K	5%	1/4W	
		VARIABLE RESISTOR				
RV402	1-228-991-00	RES, ADJ, CARBON 2.2K				

****

Ref.No	Part No.	Description				Remark
	*1-630-219-12	IS-5 BOARD ***********				
	*2-128-430-01	HOLDER (I-S), LED				
		DIODE				
D051	8-719-945-57	DIODE SLH-34YC3 (1CH S VIDEO)				
D052	8-719-945-57	DIODE SLH-34YC3 (1CH S VIDEO)				
D053	8-719-945-57	DIODE SLH-34YC3 (1CH VIDEO)				
D054	8-719-945-57	DIODE SLH-34YC3 (1CH VIDEO)				
D055	8-719-945-57	DIODE SLH-34YC3 (2CH S VIDEO)				
D056	8-719-945-57	DIODE SLH-34YC3 (2CH S VIDEO)				
D057	8-719-945-57	DIODE SLH-34YC3 (2CH VIDEO)				
D058	8-719-945-57	DIODE SLH-34YC3 (2CH VIDEO)				
D059	8-719-911-19	DIODE 1SS119				
D060	8-719-911-19	DIODE 1SS119				
D061	8-719-911-19	DIODE 1SS119				
D062	8-719-911-19	DIODE 1SS119				
		RESISTOR				
R051	1-249-415-11	CARBON	680	5%	1/4W	
R052	1-249-415-11	CARBON	680	5%	1/4W	
R053	1-249-415-11	CARBON	680	5%	1/4W	
R054	1-249-415-11	CARBON	680	5%	1/4W	
R055	1-249-428-11	CARBON	8.2K	5%	1/4W	
R056	1-249-429-11	CARBON	10K	5%	1/4W	

Ref.No	Part No.	Description				Remark
		SWITCH				
S051	1-571-875-11	SWITCH, PYUSH (4 KEY) (INPUT SELECT)				

****

Ref.No	Part No.	Description				Remark
	*A-7070-849-A	FT-39 BOARD, COMPLETE **********************				
	*2-118-219-01	HOLDER (S), LED				
	*3-662-262-00	HOLDER (D), LED				
		CAPACITOR				
C102	1-126-101-11	ELECT	100MF	20%	16V	
		DIODE				
D101	8-719-921-20	DIODE 1SS119				
D102	8-719-921-20	DIODE 1SS119				
D105	8-719-940-80	DIODE SLR-34PC3 (⬒)				
D106	8-719-940-80	DIODE SLR-34PC3 (◧)				
D107	8-719-940-80	DIODE SLR-34PC3 (◨)				
D108	8-719-940-80	DIODE SLR-34PC3 (⬓)				
D109	8-719-911-19	DIODE 1SS119				
D110	8-719-911-19	DIODE 1SS119				
D111	8-719-911-19	DIODE 1SS119				
D112	8-719-911-19	DIODE 1SS119				
D113	8-719-911-19	DIODE 1SS119				
D114	8-719-911-19	DIODE 1SS119				
D115	8-719-911-19	DIODE 1SS119				
D116	8-719-911-19	DIODE 1SS119				
D117	8-719-911-19	DIODE 1SS119				
D119	8-719-812-32	DIODE TLY123 (BLACK BALANCE WIDE RANGE)				
D120	8-719-300-71	DIODE SEL2210R (BLACK BALANCE ON/OFF)				
D121	8-719-812-32	DIODE TLY123 (BLACK CLIP)				
D123	8-719-940-80	DIODE SLR-34PC3 (◙)				
D124	8-719-940-80	DIODE SLR-34PC3 (◈)				
D126	8-719-300-71	DIODE SEL2210R (AUTO SPEED WIPE)				
D127	8-719-300-71	DIODE SEL2210R (AUTO SPEED FADER)				
D128	8-719-812-32	DIODE TLY123 (BACK COLOR)				
D129	8-719-812-32	DIODE TLY123 (BLACK)				
D130	8-719-812-32	DIODE TLY123 (WHITE)				
D132	8-719-812-32	DIODE TLY123 (WHITE BALANCE WIDE RANGE)				
D133	8-719-300-71	DIODE SEL2210R (WHITE BALANCE ON/OFF)				
D134	8-719-812-32	DIODE TLY123 (WHITE CLIP)				
D135	8-719-300-71	DIODE SEL2210R (AUTO SPEED START)				
D136	8-719-300-71	DIODE SEL2210R (VIDEO)				
D137	8-719-300-71	DIODE SEL2210R (AUDIO)				
		RESISTOR				
R107	1-249-413-11	CARBON	470	5%	1/4W	
R108	1-249-413-11	CARBON	470	5%	1/4W	
R109	1-249-413-11	CARBON	470	5%	1/4W	
R110	1-249-413-11	CARBON	470	5%	1/4W	
R112	1-249-413-11	CARBON	470	5%	1/4W	

Ref.No	Part No.	Description	Remark
R116	1-249-437-11	CARBON 47K 5% 1/4W	
R117	1-249-437-11	CARBON 47K 5% 1/4W	
R118	1-249-413-11	CARBON 470 5% 1/4W	
R119	1-249-413-11	CARBON 470 5% 1/4W	
R120	1-249-437-11	CARBON 47K 5% 1/4W	
R121	1-249-413-11	CARBON 470 5% 1/4W	
R124	1-249-413-11	CARBON 470 5% 1/4W	
R125	1-249-413-11	CARBON 470 5% 1/4W	
R127	1-249-413-11	CARBON 470 5% 1/4W	
R128	1-249-413-11	CARBON 470 5% 1/4W	
R129	1-249-413-11	CARBON 470 5% 1/4W	
R130	1-249-413-11	CARBON 470 5% 1/4W	
R131	1-249-413-11	CARBON 470 5% 1/4W	
R132	1-249-437-11	CARBON 47K 5% 1/4W	
R133	1-249-437-11	CARBON 47K 5% 1/4W	
R134	1-249-413-11	CARBON 470 5% 1/4W	
R135	1-249-413-11	CARBON 470 5% 1/4W	
R136	1-249-437-11	CARBON 47K 5% 1/4W	
R137	1-249-413-11	CARBON 470 5% 1/4W	
R138	1-249-413-11	CARBON 470 5% 1/4W	
R139	1-249-413-11	CARBON 470 5% 1/4W	
R140	1-249-413-11	CARBON 470 5% 1/4W	
R141	1-249-433-11	CARBON 22K 5% 1/4W	
R142	1-249-433-11	CARBON 22K 5% 1/4W	
R143	1-249-433-11	CARBON 22K 5% 1/4W	
R144	1-249-433-11	CARBON 22K 5% 1/4W	
R145	1-249-433-11	CARBON 22K 5% 1/4W	
R146	1-249-433-11	CARBON 22K 5% 1/4W	
R147	1-249-433-11	CARBON 22K 5% 1/4W	
R148	1-249-433-11	CARBON 22K 5% 1/4W	
R149	1-249-433-11	CARBON 22K 5% 1/4W	
R150	1-249-433-11	CARBON 22K 5% 1/4W	
R197	1-249-421-11	CARBON 2.2K 5% 1/4W	
R198	1-249-421-11	CARBON 2.2K 5% 1/4W	
R199	1-249-433-11	CARBON 22K 5% 1/4W	

VARIABLE RESISTOR

Ref.No	Part No.	Description	Remark
RV105	1-237-400-11	RES, VAR, CARBON 10K (WHITE CLIP)	
RV106	1-237-400-11	RES, VAR, CARBON 10K (BLACK CLIP)	
RV107	1-238-564-11	RES, VAR, SLIDE 1K/1K (WIPE)	
RV109	1-237-423-21	RES, VAR, CARBON 1K/1K (COLOR CORRECT)	
RV110	1-237-423-21	RES, VAR, CARBON 1K/1K (COLIR CORRECT)	
RV111	1-238-518-11	RES, VAR, CARBON 250K (AUTO SPEED)	
RV112	1-238-563-11	RES, VAR, SLIDE 20K/20K (FADER)	

SWITCH

Ref.No	Part No.	Description	Remark
S104	1-570-797-21	SWITCH, PUSH (1 KEY) (WIPE PATTERN ◧)	
S105	1-570-797-21	SWITCH, PUSH (1 KEY) (WIPE PATTERN ⬒)	
S106	1-570-797-21	SWITCH, PUSH (1 KEY) (WIPE PATTERN ◨)	
S107	1-570-797-21	SWITCH, PUSH (1 KEY) (WIPE PATTERN ⬓)	
S108	1-570-796-21	SWITCH, ROTARY (COLOR SELECT)	
S110	1-570-797-11	SWITCH, PUSH (1 KEY) (BLACK BALANCE ON/OFF)	
S111	1-570-797-11	SWITCH, PUSH (1 KEY) (BLACK BALANCE WIDE RANGE)	
S112	1-570-797-11	SWITCH, PUSH (1 KEY) (BLACK CLIP)	
S114	1-570-797-21	SWITCH, PUSH (1 KEY) (WIPE PATTERN ◙)	
S115	1-570-797-21	SWITCH, PUSH (1 KEY) (WIPE PATTERN ◈)	
S117	1-570-797-11	SWITCH, PUSH (1 KEY) (AUTO SPEED WIPE)	
S118	1-570-797-11	SWITCH, PUSH (1 KEY) (AUTO SPEED FADER)	
S122	1-570-797-11	SWITCH, PUSH (1 KEY) (WHITE BALANCE ON/OFF)	
S123	1-570-797-11	SWITCH, PUSH (1 KEY) (WHITE BALANCE WIDE RANGE)	
S124	1-570-797-11	SWITCH, PUSH (1 KEY) (WHITE CLIP)	
S125	1-570-797-21	SWITCH, PUSH (1 KEY) (AUTO SPEED START)	
S126	1-570-797-11	SWITCH, PUSH (1 KEY) (VIDEO)	
S127	1-570-797-11	SWITCH, PUSH (1 KEY) (AUDIO)	
S128	1-571-874-11	SWITCH, PYSH (3 KEY) (VIDEO WHITE/BLACK/BACK COLOR)	

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*A-7061-748-A YS-6 BOARD, COMPLETE
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Part No.	Description
*2-352-113-01	CASE, SHIELD
*2-352-115-01	LID, SHIELD CASE
*2-382-687-11	HOLDER (2), PC BOARD
7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3

CAPACITOR

Ref.No	Part No.	Description	Remark
C101	1-124-465-00	ELECT 0.47MF 20% 50V	
C102	1-124-499-11	ELECT 1MF 20% 50V	
C103	1-124-446-11	ELECT 47MF 20% 10V	
C104	1-161-379-00	CERAMIC 0.01MF 30% 16V	
C105	1-124-446-11	ELECT 47MF 20% 10V	
C106	1-161-379-00	CERAMIC 0.01MF 30% 16V	
C107	1-124-446-11	ELECT 47MF 20% 10V	
C108	1-124-446-11	ELECT 47MF 20% 10V	
C109	1-124-465-00	ELECT 0.47MF 20% 50V	
C110	1-124-499-11	ELECT 1MF 20% 50V	
C111	1-124-446-11	ELECT 47MF 20% 10V	
C112	1-124-499-11	ELECT 1MF 20% 50V	
C113	1-124-446-11	ELECT 47MF 20% 10V	
C114	1-124-465-00	ELECT 0.47MF 20% 50V	
C115	1-126-101-11	ELECT 100MF 20% 16V	
C116	1-124-446-11	ELECT 47MF 20% 10V	
C117	1-124-443-00	ELECT 100MF 20% 10V	
C118	1-124-443-00	ELECT 100MF 20% 10V	
C119	1-123-875-11	ELECT 10MF 20% 50V	
C120	1-123-875-11	ELECT 10MF 20% 50V	
C121	1-124-499-11	ELECT 1MF 20% 50V	
C122	1-162-851-11	CERAMIC 0.1MF 10% 16V	
C123	1-124-499-11	ELECT 1MF 20% 50V	
C124	1-162-851-11	CERAMIC 0.1MF 10% 16V	
C125	1-161-379-00	CERAMIC 0.01MF 30% 16V	

When indicating parts by reference number, please include the board name.

YS-6

Ref.No	Part No.	Description			Remark
C126	1-124-446-11	ELECT	47MF	20%	10V
C127	1-161-379-00	CERAMIC	0.01MF	30%	16V
C128	1-161-379-00	CERAMIC	0.01MF	30%	16V
C129	1-161-379-00	CERAMIC	0.01MF	30%	16V
C130	1-124-446-11	ELECT	47MF	20%	10V
C131	1-161-379-00	CERAMIC	0.01MF	30%	16V
C132	1-161-379-00	CERAMIC	0.01MF	30%	16V
C133	1-101-880-00	CERAMIC	47PF	5%	50V
C134	1-161-379-00	CERAMIC	0.01MF	30%	16V
C135	1-102-973-00	CERAMIC	100PF	5%	50V
C136	1-161-379-00	CERAMIC	0.01MF	30%	16V
C141	1-126-101-11	ELECT	100MF	20%	16V
C142	1-124-446-11	ELECT	47MF	20%	10V
C143	1-124-443-00	ELECT	100MF	20%	10V
C144	1-124-443-00	ELECT	100MF	20%	10V
C145	1-161-379-00	CERAMIC	0.01MF	30%	16V
C146	1-124-446-11	ELECT	47MF	20%	10V
C147	1-124-446-11	ELECT	47MF	20%	10V
C148	1-161-379-00	CERAMIC	0.01MF	30%	16V
C150	1-161-379-00	CERAMIC	0.01MF	30%	16V
C151	1-102-959-00	CERAMIC	22PF	5%	50V
C202	1-162-851-11	CERAMIC	0.1MF	10%	16V
C203	1-101-880-00	CERAMIC	47PF	5%	50V
C204	1-101-880-00	CERAMIC	47PF	5%	50V
C205	1-102-973-00	CERAMIC	100PF	5%	50V
C206	1-102-973-00	CERAMIC	100PF	5%	50V
C207	1-102-816-00	CERAMIC	120PF	5%	50V
C208	1-101-880-00	CERAMIC	47PF	5%	50V
C209	1-161-379-00	CERAMIC	0.01MF	30%	16V
C210	1-161-379-00	CERAMIC	0.01MF	30%	16V
C211	1-161-379-00	CERAMIC	0.01MF	30%	16V
C212	1-123-875-11	ELECT	10MF	20%	50V
C213	1-124-446-11	ELECT	47MF	20%	10V
C214	1-123-875-11	ELECT	10MF	20%	50V
C215	1-124-499-11	ELECT	1MF	20%	50V
C216	1-124-464-11	ELECT	0.22MF	20%	50V
C217	1-124-499-11	ELECT	1MF	20%	50V
C218	1-126-176-11	ELECT	220MF	20%	10V
C219	1-162-851-11	CERAMIC	0.1MF	10%	16V
C220	1-124-477-11	ELECT	47MF	20%	16V
C221	1-123-875-11	ELECT	10MF	20%	50V
C222	1-123-875-11	ELECT	10MF	20%	50V
C223	1-124-446-11	ELECT	47MF	20%	10V
C224	1-161-379-00	CERAMIC	0.01MF	30%	16V
C225	1-124-473-11	ELECT	1000MF	20%	10V
C226	1-124-927-11	ELECT	4.7MF	20%	50V
C227	1-124-473-11	ELECT	1000MF	20%	10V
C228	1-124-927-11	ELECT	4.7MF	20%	50V
C229	1-161-379-00	CERAMIC	0.01MF	30%	16V
C230	1-161-379-00	CERAMIC	0.01MF	30%	16V
C231	1-161-379-00	CERAMIC	0.01MF	30%	16V
C234	1-123-875-11	ELECT	10MF	20%	50V
C235	1-124-465-00	ELECT	0.47MF	20%	50V
C236	1-123-875-11	ELECT	10MF	20%	50V
C237	1-123-875-11	ELECT	10MF	20%	50V
C238	1-161-379-00	CERAMIC	0.01MF	30%	16V
C239	1-124-446-11	ELECT	47MF	20%	10V
C240	1-161-379-00	CERAMIC	0.01MF	30%	16V
C241	1-124-446-11	ELECT	47MF	20%	10V
C242	1-124-477-11	ELECT	47MF	20%	16V
C243	1-161-379-00	CERAMIC	0.01MF	30%	16V
C244	1-124-477-11	ELECT	47MF	20%	16V
C245	1-161-379-00	CERAMIC	0.01MF	30%	16V
C246	1-102-961-00	CERAMIC	27PF	5%	50V
C248	1-102-074-00	CERAMIC	0.001MF	10%	50V
C249	1-131-348-00	TANTALUM	1.5MF	20%	25V
C250	1-162-851-11	CERAMIC	0.1MF	10%	16V
C251	1-123-875-11	ELECT	10MF	20%	50V
C252	1-124-477-11	ELECT	47MF	20%	16V
C301	1-124-446-11	ELECT	47MF	20%	10V
C302	1-124-465-00	ELECT	0.47MF	20%	50V
C303	1-102-959-00	CERAMIC	22PF	5%	50V
C304	1-124-499-11	ELECT	1MF	20%	50V
C305	1-124-446-11	ELECT	47MF	20%	10V
C306	1-161-379-00	CERAMIC	0.01MF	30%	16V
C307	1-124-446-11	ELECT	47MF	20%	10V
C309	1-124-446-11	ELECT	47MF	20%	10V
C310	1-124-446-11	ELECT	47MF	20%	10V
C311	1-124-465-00	ELECT	0.47MF	20%	50V
C314	1-124-477-11	ELECT	47MF	20%	16V
C315	1-124-446-11	ELECT	47MF	20%	10V
C316	1-162-851-11	CERAMIC	0.1MF	10%	16V
C317	1-102-965-00	CERAMIC	39PF	5%	50V
C318	1-124-499-11	ELECT	1MF	20%	50V
C319	1-124-446-11	ELECT	47MF	20%	10V
C320	1-161-379-00	CERAMIC	0.01MF	30%	16V
C321	1-124-446-11	ELECT	47MF	20%	10V
C322	1-161-379-00	CERAMIC	0.01MF	30%	16V
C323	1-124-499-11	ELECT	1MF	20%	50V
C324	1-102-947-00	CERAMIC	10PF	0.5PF	50V
C325	1-161-379-00	CERAMIC	0.01MF	30%	16V
C326	1-102-963-00	CERAMIC	33PF	5%	50V
C328	1-124-446-11	ELECT	47MF	20%	10V
C329	1-161-379-00	CERAMIC	0.01MF	30%	16V
C330	1-161-379-00	CERAMIC	0.01MF	30%	16V
C331	1-123-875-11	ELECT	10MF	20%	50V
C332	1-162-851-11	CERAMIC	0.1MF	10%	16V
C333	1-123-875-11	ELECT	10MF	20%	50V
C334	1-161-379-00	CERAMIC	0.01MF	30%	16V
C335	1-123-875-11	ELECT	10MF	20%	50V
C336	1-161-379-00	CERAMIC	0.01MF	30%	16V
C337	1-102-947-00	CERAMIC	10PF	0.5PF	50V
C338	1-124-902-00	ELECT	0.47MF	20%	50V
C341	1-102-824-00	CERAMIC	470PF	10%	50V
C342	1-124-927-11	ELECT	4.7MF	20%	50V
C343	1-124-499-11	ELECT	1MF	20%	50V

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description			Remark
C344	1-161-379-00	CERAMIC	0.01MF	30%	16V
C345	1-161-379-00	CERAMIC	0.01MF	30%	16V
C346	1-124-446-11	ELECT	47MF	20%	10V
C347	1-161-379-00	CERAMIC	0.01MF	30%	16V
C350	1-102-959-00	CERAMIC	22PF	5%	50V
C351	1-161-379-00	CERAMIC	0.01MF	30%	16V
C352	1-161-379-00	CERAMIC	0.01MF	30%	16V
C353	1-161-379-00	CERAMIC	0.01MF	30%	16V
C354	1-124-446-11	ELECT	47MF	20%	10V
C355	1-124-446-11	ELECT	47MF	20%	10V
C356	1-161-379-00	CERAMIC	0.01MF	30%	16V
C357	1-124-477-11	ELECT	47MF	20%	16V
C358	1-161-379-00	CERAMIC	0.01MF	30%	16V
C359	1-124-446-11	ELECT	47MF	20%	10V
C360	1-124-499-11	ELECT	1MF	20%	50V
C361	1-101-880-00	CERAMIC	47PF	5%	50V
C362	1-124-446-11	ELECT	47MF	20%	10V
C363	1-124-446-11	ELECT	47MF	20%	10V
C364	1-124-446-11	ELECT	47MF	20%	10V
C365	1-124-446-11	ELECT	47MF	20%	10V
C366	1-131-381-00	TANTALUM	47MF	10%	10V
C367	1-124-446-11	ELECT	47MF	20%	10V
C368	1-161-379-00	CERAMIC	0.01MF	30%	16V
C371	1-124-910-11	ELECT	47MF	20%	50V
C372	1-161-379-00	CERAMIC	0.01MF	30%	16V
C373	1-131-381-00	TANTALUM	47MF	10%	10V
C374	1-131-363-00	TANTALUM	4.7MF	10%	16V
C375	1-131-363-00	TANTALUM	4.7MF	10%	16V
C376	1-124-446-11	ELECT	47MF	20%	10V
C377	1-124-477-11	ELECT	47MF	20%	16V
C378	1-124-465-00	ELECT	0.47MF	20%	50V
C379	1-161-379-00	CERAMIC	0.01MF	30%	16V
C380	1-124-446-11	ELECT	47MF	20%	10V
C383	1-123-875-11	ELECT	10MF	20%	50V
C384	1-123-875-11	ELECT	10MF	20%	50V
C385	1-124-465-00	ELECT	0.47MF	20%	50V
C386	1-124-499-11	ELECT	1MF	20%	50V
C387	1-101-880-00	CERAMIC	47PF	5%	50V
C388	1-102-951-00	CERAMIC	15PF	5%	50V
C389	1-102-959-00	CERAMIC	22PF	5%	50V
C391	1-124-446-11	ELECT	47MF	20%	10V
C392	1-124-446-11	ELECT	47MF	20%	10V
C393	1-161-379-00	CERAMIC	0.01MF	30%	16V
C394	1-161-379-00	CERAMIC	0.01MF	30%	16V
C395	1-124-446-11	ELECT	47MF	20%	10V
C396	1-124-446-11	ELECT	47MF	20%	10V
C397	1-124-446-11	ELECT	47MF	20%	10V
C398	1-102-816-00	CERAMIC	120PF	5%	50V
C399	1-124-446-11	ELECT	47MF	20%	10V
C400	1-102-965-00	CERAMIC	39PF	5%	50V
C401	1-124-477-11	ELECT	47MF	20%	16V
C402	1-161-379-00	CERAMIC	0.01MF	30%	16V
C403	1-124-446-11	ELECT	47MF	20%	10V

Ref.No	Part No.	Description			Remark
C404	1-161-379-00	CERAMIC	0.01MF	30%	16V
C405	1-162-851-11	CERAMIC	0.1MF	10%	16V
C406	1-162-851-11	CERAMIC	0.1MF	10%	16V
C407	1-162-851-11	CERAMIC	0.1MF	10%	16V
C408	1-162-851-11	CERAMIC	0.1MF	10%	16V
C409	1-162-851-11	CERAMIC	0.1MF	10%	16V
C410	1-124-477-11	ELECT	47MF	20%	16V
C411	1-124-477-11	ELECT	47MF	20%	16V
C412	1-124-477-11	ELECT	47MF	20%	16V
C413	1-161-379-00	CERAMIC	0.01MF	30%	16V
C414	1-124-446-11	ELECT	47MF	20%	10V
C415	1-161-379-00	CERAMIC	0.01MF	30%	16V
C416	1-124-477-11	ELECT	47MF	20%	25V
C417	1-161-379-00	CERAMIC	0.01MF	30%	16V
C418	1-124-902-00	ELECT	0.47MF	20%	50V
C419	1-123-875-11	ELECT	10MF	20%	50V
C420	1-161-379-00	CERAMIC	0.01MF	30%	16V
C421	1-101-888-00	CERAMIC	68PF	5%	50V
C422	1-161-379-00	CERAMIC	0.01MF	30%	16V
C423	1-124-446-11	ELECT	47MF	20%	10V
C424	1-124-446-11	ELECT	47MF	20%	10V
C425	1-161-379-00	CERAMIC	0.01MF	30%	16V
C426	1-126-176-11	ELECT	220MF	20%	10V
C427	1-126-176-11	ELECT	220MF	20%	10V
C500	1-123-875-11	ELECT	10MF	20%	50V
C503	1-102-947-00	CERAMIC	10PF	0.5PF	50V

CONNECTOR

CN100	1-506-469-11	PIN, CONNECTOR 4P
CN101	1-506-469-11	PIN, CONNECTOR 4P
CN103	1-506-468-11	PIN, CONNECTOR 3P
CN104	1-506-470-11	PIN, CONNECTOR 5P
CN105	*1-506-470-11	PIN, CONNECTOR 5P
CN113	1-506-468-11	PIN, CONNECTOR 3P
CN115	*1-560-892-00	PIN, CONNECTOR 4P
CN119	1-506-469-11	PIN, CONNECTOR 4P
CN124	1-506-468-11	PIN, CONNECTOR 3P
CN127	1-506-468-11	PIN, CONNECTOR 3P
CN128	1-506-471-11	PIN, CONNECTOR 6P
CN511	1-506-467-11	PIN, CONNECTOR 2P

TRIMMER

CV205	1-141-245-00	TRIMMER, CERAMIC
CV247	1-141-245-00	TRIMMER, CERAMIC

DIODE

D101	8-719-911-19	DIODE 1SS119
D102	8-719-911-19	DIODE 1SS119
D103	8-719-911-19	DIODE 1SS119
D104	8-719-911-19	DIODE 1SS119
D201	8-719-911-19	DIODE 1SS119
D203	8-719-109-86	DIODE RD5.1ESB3

When indicating parts by reference number, please include the board name.

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Ref.No	Part No.	Description	Remark
D204	8-719-911-19	DIODE 1SS119	
D205	8-719-911-19	DIODE 1SS119	
D209	8-719-911-19	DIODE 1SS119	
D210	8-719-911-19	DIODE 1SS119	
D211	8-719-911-19	DIODE 1SS119	
D233	8-719-920-95	DIODE 1T25-0	
D301	8-719-911-19	DIODE 1SS119	
D302	8-719-911-19	DIODE 1SS119	
D303	8-719-911-19	DIODE 1SS119	
D304	8-719-911-19	DIODE 1SS119	
D305	8-719-911-19	DIODE 1SS119	
D306	8-719-911-19	DIODE 1SS119	
D307	8-719-911-19	DIODE 1SS119	
D308	8-719-911-19	DIODE 1SS119	
D309	8-719-911-19	DIODE 1SS119	
D310	8-719-911-19	DIODE 1SS119	
D311	8-719-911-19	DIODE 1SS119	
D312	8-719-911-19	DIODE 1SS119	
		IC	
IC101	8-759-140-53	.IC UPD4053BC	
IC102	8-759-603-55	IC M51272P	
IC103	8-759-602-06	IC M5109P	
IC104	8-759-001-42	IC MC74HC174N	
IC201	8-759-140-53	IC UPD4053BC	
IC202	8-752-321-16	IC CXD1030M	
IC203	8-752-006-12	IC CX20061	
IC204	8-759-302-99	IC CX20186	
IC205	8-759-001-42	IC MC74HC174N	
IC207	8-759-140-53	IC UPD4053BC	
IC208	8-759-103-19	IC UPC319C	
IC301	8-759-140-53	IC UPD4053BC	
IC302	8-759-140-53	IC UPD4053BC	
IC303	8-759-140-53	IC UPD4053BC	
IC304	8-759-602-06	IC M5109P	
IC305	8-759-602-06	IC M5109P	
IC306	8-759-973-61	IC TL026CP	
IC307	8-759-990-82	IC TL082CP	
IC308	8-759-132-40	IC UPC324C	
IC309	8-759-973-61	IC TL026CP	
		COIL	
L147	1-410-478-11	INDUCTOR 47UH	
L201	1-410-476-11	INDUCTOR 33UH	
L202	1-408-411-00	INDUCTOR 15UH	
L301	1-410-471-11	INDUCTOR 12UH	
L302	1-410-478-11	INDUCTOR 47UH	
		TRANSISTOR	
Q101	8-729-900-80	TRANSISTOR DTC114ES	
Q102	8-729-625-91	TRANSISTOR 2SC2259-F	
Q103	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q104	8-729-139-96	TRANSISTOR 2SC2785-HFE	
Q105	8-729-900-80	TRANSISTOR DTC114ES	
Q106	8-729-625-91	TRANSISTOR 2SC2259-F	
Q107	8-729-625-91	TRANSISTOR 2SC2259-F	
Q108	8-729-900-80	TRANSISTOR DTC114ES	
Q109	8-729-900-80	TRANSISTOR DTC114ES	
Q110	8-729-900-80	TRANSISTOR DTC114ES	
Q111	8-729-139-96	TRANSISTOR 2SC2785-HFE	
Q112	8-729-139-96	TRANSISTOR 2SC2785-HFE	
Q113	8-729-139-96	TRANSISTOR 2SC2785-HFE	
Q114	8-729-139-96	TRANSISTOR 2SC2785-HFE	
Q115	8-729-139-96	TRANSISTOR 2SC2785-HFE	
Q116	8-729-900-80	TRANSISTOR DTC114ES	
Q117	8-729-139-96	TRANSISTOR 2SC2785-HFE	
Q118	8-729-139-96	TRANSISTOR 2SC2785-HFE	
Q120	8-729-139-96	TRANSISTOR 2SC2785-HFE	
Q121	8-729-139-96	TRANSISTOR 2SC2785-HFE	
Q122	8-729-900-80	TRANSISTOR DTC114ES	
Q123	8-729-900-80	TRANSISTOR DTC114ES	
Q124	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q125	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q126	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q127	8-729-173-38	TRANSISTOR 2SA733-K	
Q201	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q202	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q203	8-729-900-80	TRANSISTOR DTC114ES	
Q204	8-729-900-61	TRANSISTOR DTA114ES	
Q205	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q206	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q207	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q208	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q209	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q211	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q212	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q213	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q214	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q215	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q216	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q217	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q218	8-729-173-38	TRANSISTOR 2SA733-K	
Q219	8-729-173-38	TRANSISTOR 2SA733-K	
Q220	8-729-173-38	TRANSISTOR 2SA733-K	
Q221	8-729-173-38	TRANSISTOR 2SA733-K	
Q222	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q223	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q301	8-729-173-38	TRANSISTOR 2SA733-K	
Q302	8-729-900-61	TRANSISTOR DTA114ES	
Q303	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q304	8-729-173-38	TRANSISTOR 2SA733-K	
Q305	8-729-173-38	TRANSISTOR 2SA733-K	
Q306	8-729-173-38	TRANSISTOR 2SA733-K	
Q307	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q308	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q309	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q310	8-729-119-78	TRANSISTOR 2SC2785-HFE	

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark
Q311	8-729-173-38	TRANSISTOR 2SA733-K	
Q312	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q313	8-729-173-38	TRANSISTOR 2SA733-K	
Q314	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q315	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q316	8-729-173-38	TRANSISTOR 2SA733-K	
Q318	8-729-173-38	TRANSISTOR 2SA733-K	
Q319	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q320	8-729-173-38	TRANSISTOR 2SA733-K	
Q321	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q322	8-729-900-61	TRANSISTOR DTA114ES	
Q323	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q324	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q325	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q326	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q327	8-729-173-38	TRANSISTOR 2SA733-K	
Q328	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q329	8-729-900-80	TRANSISTOR DTC114ES	
Q330	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q331	8-729-173-38	TRANSISTOR 2SA733-K	
Q332	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q333	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q334	8-729-173-38	TRANSISTOR 2SA733-K	
Q335	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q336	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q337	8-729-173-38	TRANSISTOR 2SA733-K	
Q338	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q340	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q341	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q342	8-729-173-38	TRANSISTOR 2SA733-K	
Q343	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q344	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q345	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q346	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q347	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q348	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q349	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q350	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q351	8-729-173-38	TRANSISTOR 2SA733-K	
Q352	8-729-173-38	TRANSISTOR 2SA733-K	
Q353	8-729-625-91	TRANSISTOR 2SC2259-F	
Q354	8-729-697-92	TRANSISTOR 2SA979	
Q355	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q356	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q357	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q359	8-729-173-38	TRANSISTOR 2SA733-K	
Q360	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q361	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q370	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q371	8-729-173-38	TRANSISTOR 2SA733-K	
Q372	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q373	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q374	8-729-173-38	TRANSISTOR 2SA733-K	

Ref.No	Part No.	Description	Remark
Q375	8-729-625-91	TRANSISTOR 2SC2259-F	
Q376	8-729-173-38	TRANSISTOR 2SA733-K	
Q377	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q378	8-729-900-80	TRANSISTOR DTC114ES	
Q379	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q380	8-729-119-78	TRANSISTOR 2SC2785-HFE	

RESISTOR

Ref.No	Part No.	Description				Remark
R101	1-249-413-11	CARBON	470	5%	1/4W	
R102	1-249-413-11	CARBON	470	5%	1/4W	
R103	1-249-417-11	CARBON	1K	5%	1/4W	
R104	1-249-413-11	CARBON	470	5%	1/4W	
R105	1-249-417-11	CARBON	1K	5%	1/4W	
R106	1-249-424-11	CARBON	3.9K	5%	1/4W	
R107	1-249-408-11	CARBON	180	5%	1/4W	
R108	1-249-421-11	CARBON	2.2K	5%	1/4W	
R109	1-249-433-11	CARBON	22K	5%	1/4W	
R110	1-249-429-11	CARBON	10K	5%	1/4W	
R111	1-249-417-11	CARBON	1K	5%	1/4W	
R112	1-249-417-11	CARBON	1K	5%	1/4W	
R113	1-249-421-11	CARBON	2.2K	5%	1/4W	
R114	1-249-413-11	CARBON	470	5%	1/4W	
R115	1-249-417-11	CARBON	1K	5%	1/4W	
R116	1-249-413-11	CARBON	470	5%	1/4W	
R117	1-249-417-11	CARBON	1K	5%	1/4W	
R118	1-249-417-11	CARBON	1K	5%	1/4W	
R119	1-249-413-11	CARBON	470	5%	1/4W	
R120	1-249-417-11	CARBON	1K	5%	1/4W	
R121	1-249-413-11	CARBON	470	5%	1/4W	
R124	1-249-421-11	CARBON	2.2K	5%	1/4W	
R125	1-249-410-11	CARBON	270	5%	1/4W	
R126	1-249-417-11	CARBON	1K	5%	1/4W	
R127	1-249-433-11	CARBON	22K	5%	1/4W	
R128	1-249-429-11	CARBON	10K	5%	1/4W	
R129	1-249-418-11	CARBON	1.2K	5%	1/4W	
R130	1-249-417-11	CARBON	1K	5%	1/4W	
R131	1-249-429-11	CARBON	10K	5%	1/4W	
R132	1-249-413-11	CARBON	470	5%	1/4W	
R133	1-249-421-11	CARBON	2.2K	5%	1/4W	
R134	1-249-413-11	CARBON	470	5%	1/4W	
R135	1-249-429-11	CARBON	10K	5%	1/4W	
R136	1-249-421-11	CARBON	2.2K	5%	1/4W	
R137	1-249-417-11	CARBON	1K	5%	1/4W	
R138	1-249-417-11	CARBON	1K	5%	1/4W	
R139	1-249-421-11	CARBON	2.2K	5%	1/4W	
R140	1-249-421-11	CARBON	2.2K	5%	1/4W	
R141	1-249-429-11	CARBON	10K	5%	1/4W	
R142	1-249-429-11	CARBON	10K	5%	1/4W	
R143	1-215-453-00	METAL	22K	1%	1/6W	
R144	1-215-449-00	METAL	15K	1%	1/6W	
R145	1-215-453-00	METAL	22K	1%	1/6W	
R146	1-215-449-00	METAL	15K	1%	1/6W	
R149	1-249-429-11	CARBON	10K	5%	1/4W	

When indicating parts by reference number, please include the board name.

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Ref.No	Part No.	Description				Remark
R150	1-249-433-11	CARBON	22K	5%	1/4W	
R151	1-249-411-11	CARBON	330	5%	1/4W	
R152	1-249-409-11	CARBON	220	5%	1/4W	
R153	1-249-413-11	CARBON	470	5%	1/4W	
R154	1-249-417-11	CARBON	1K	5%	1/4W	
R155	1-249-413-11	CARBON	470	5%	1/4W	
R158	1-249-413-11	CARBON	470	5%	1/4W	
R159	1-249-421-11	CARBON	2.2K	5%	1/4W	
R160	1-249-409-11	CARBON	220	5%	1/4W	
R161	1-249-421-11	CARBON	2.2K	5%	1/4W	
R162	1-249-417-11	CARBON	1K	5%	1/4W	
R163	1-249-417-11	CARBON	1K	5%	1/4W	
R164	1-249-411-11	CARBON	330	5%	1/4W	
R165	1-249-416-11	CARBON	820	5%	1/4W	
R166	1-249-413-11	CARBON	470	5%	1/4W	
R167	1-249-416-11	CARBON	820	5%	1/4W	
R170	1-249-413-11	CARBON	470	5%	1/4W	
R171	1-249-421-11	CARBON	2.2K	5%	1/4W	
R172	1-249-410-11	CARBON	270	5%	1/4W	
R173	1-249-417-11	CARBON	1K	5%	1/4W	
R174	1-249-433-11	CARBON	22K	5%	1/4W	
R175	1-249-429-11	CARBON	10K	5%	1/4W	
R176	1-249-418-11	CARBON	1.2K	5%	1/4W	
R177	1-249-417-11	CARBON	1K	5%	1/4W	
R178	1-249-429-11	CARBON	10K	5%	1/4W	
R179	1-249-413-11	CARBON	470	5%	1/4W	
R180	1-249-421-11	CARBON	2.2K	5%	1/4W	
R181	1-249-429-11	CARBON	10K	5%	1/4W	
R182	1-249-413-11	CARBON	470	5%	1/4W	
R183	1-249-421-11	CARBON	2.2K	5%	1/4W	
R184	1-249-417-11	CARBON	1K	5%	1/4W	
R185	1-249-417-11	CARBON	1K	5%	1/4W	
R186	1-249-429-11	CARBON	10K	5%	1/4W	
R200	1-249-429-11	CARBON	10K	5%	1/4W	
R201	1-249-429-11	CARBON	10K	5%	1/4W	
R202	1-249-429-11	CARBON	10K	5%	1/4W	
R203	1-249-415-11	CARBON	680	5%	1/4W	
R204	1-249-413-11	CARBON	470	5%	1/4W	
R206	1-249-408-11	CARBON	180	5%	1/4W	
R207	1-249-417-11	CARBON	1K	5%	1/4W	
R208	1-249-417-11	CARBON	1K	5%	1/4W	
R209	1-247-903-00	CARBON	1M	5%	1/4W	
R211	1-249-414-11	CARBON	560	5%	1/4W	
R212	1-249-431-11	CARBON	15K	5%	1/4W	
R213	1-249-425-11	CARBON	4.7K	5%	1/4W	
R214	1-249-433-11	CARBON	22K	5%	1/4W	
R215	1-249-437-11	CARBON	47K	5%	1/4W	
R216	1-249-429-11	CARBON	10K	5%	1/4W	
R217	1-249-421-11	CARBON	2.2K	5%	1/4W	
R219	1-249-415-11	CARBON	680	5%	1/4W	
R221	1-249-429-11	CARBON	10K	5%	1/4W	
R222	1-249-421-11	CARBON	2.2K	5%	1/4W	
R223	1-249-438-11	CARBON	56K	5%	1/4W	
R224	1-249-426-11	CARBON	5.6K	5%	1/4W	
R225	1-249-417-11	CARBON	1K	5%	1/4W	
R226	1-249-417-11	CARBON	1K	5%	1/4W	
R227	1-249-433-11	CARBON	22K	5%	1/4W	
R228	1-249-423-11	CARBON	3.3K	5%	1/4W	
R229	1-247-903-00	CARBON	1M	5%	1/4W	
R230	1-247-893-11	CARBON	390K	5%	1/4W	
R231	1-249-417-11	CARBON	1K	5%	1/4W	
R232	1-249-413-11	CARBON	470	5%	1/4W	
R233	1-249-429-11	CARBON	10K	5%	1/4W	
R234	1-249-417-11	CARBON	1K	5%	1/4W	
R241	1-249-413-11	CARBON	470	5%	1/4W	
R242	1-249-433-11	CARBON	22K	5%	1/4W	
R243	1-249-417-11	CARBON	1K	5%	1/4W	
R244	1-249-413-11	CARBON	470	5%	1/4W	
R245	1-249-433-11	CARBON	22K	5%	1/4W	
R246	1-249-417-11	CARBON	1K	5%	1/4W	
R247	1-249-429-11	CARBON	10K	5%	1/4W	
R248	1-247-838-00	CARBON	2K	5%	1/4W	
R249	1-247-838-00	CARBON	2K	5%	1/4W	
R251	1-247-838-00	CARBON	2K	5%	1/4W	
R252	1-247-838-00	CARBON	2K	5%	1/4W	
R254	1-249-429-11	CARBON	10K	5%	1/4W	
R255	1-249-429-11	CARBON	10K	5%	1/4W	
R256	1-249-421-11	CARBON	2.2K	5%	1/4W	
R257	1-249-426-11	CARBON	5.6K	5%	1/4W	
R258	1-249-409-11	CARBON	220	5%	1/4W	
R259	1-249-425-11	CARBON	4.7K	5%	1/4W	
R260	1-249-417-11	CARBON	1K	5%	1/4W	
R262	1-249-436-11	CARBON	39K	5%	1/4W	
R263	1-249-419-11	CARBON	1.5K	5%	1/4W	
R264	1-249-413-11	CARBON	470	5%	1/4W	
R265	1-249-417-11	CARBON	1K	5%	1/4W	
R266	1-249-417-11	CARBON	1K	5%	1/4W	
R267	1-249-434-11	CARBON	27K	5%	1/4W	
R268	1-249-437-11	CARBON	47K	5%	1/4W	
R269	1-249-409-11	CARBON	220	5%	1/4W	
R270	1-249-425-11	CARBON	4.7K	5%	1/4W	
R271	1-249-413-11	CARBON	470	5%	1/4W	
R272	1-249-413-11	CARBON	470	5%	1/4W	
R273	1-249-425-11	CARBON	4.7K	5%	1/4W	
R274	1-249-426-11	CARBON	5.6K	5%	1/4W	
R279	1-249-441-11	CARBON	100K	5%	1/4W	
R280	1-249-429-11	CARBON	10K	5%	1/4W	
R281	1-247-887-00	CARBON	220K	5%	1/4W	
R282	1-249-425-11	CARBON	4.7K	5%	1/4W	
R283	1-249-429-11	CARBON	10K	5%	1/4W	
R286	1-249-430-11	CARBON	12K	5%	1/4W	
R288	1-249-433-11	CARBON	22K	5%	1/4W	
R301	1-249-413-11	CARBON	470	5%	1/4W	
R302	1-249-429-11	CARBON	10K	5%	1/4W	
R303	1-249-435-11	CARBON	33K	5%	1/4W	
R304	1-249-417-11	CARBON	1K	5%	1/4W	

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description				Remark
R305	1-249-413-11	CARBON	470	5%	1/4W	
R306	1-249-405-11	CARBON	100	5%	1/4W	
R307	1-249-421-11	CARBON	2.2K	5%	1/4W	
R308	1-249-418-11	CARBON	1.2K	5%	1/4W	
R309	1-249-423-11	CARBON	3.3K	5%	1/4W	
R310	1-249-413-11	CARBON	470	5%	1/4W	
R311	1-249-421-11	CARBON	2.2K	5%	1/4W	
R312	1-249-422-11	CARBON	2.7K	5%	1/4W	
R313	1-249-418-11	CARBON	1.2K	5%	1/4W	
R314	1-249-413-11	CARBON	470	5%	1/4W	
R315	1-249-423-11	CARBON	3.3K	5%	1/4W	
R316	1-249-413-11	CARBON	470	5%	1/4W	
R317	1-249-431-11	CARBON	15K	5%	1/4W	
R318	1-249-425-11	CARBON	4.7K	5%	1/4W	
R319	1-249-413-11	CARBON	470	5%	1/4W	
R320	1-249-421-11	CARBON	2.2K	5%	1/4W	
R321	1-249-421-11	CARBON	2.2K	5%	1/4W	
R322	1-249-433-11	CARBON	22K	5%	1/4W	
R323	1-249-413-11	CARBON	470	5%	1/4W	
R324	1-249-413-11	CARBON	470	5%	1/4W	
R325	1-249-417-11	CARBON	1K	5%	1/4W	
R326	1-249-413-11	CARBON	470	5%	1/4W	
R327	1-249-429-11	CARBON	10K	5%	1/4W	
R328	1-249-413-11	CARBON	470	5%	1/4W	
R329	1-249-421-11	CARBON	2.2K	5%	1/4W	
R330	1-249-433-11	CARBON	22K	5%	1/4W	
R331	1-249-429-11	CARBON	10K	5%	1/4W	
R332	1-249-413-11	CARBON	470	5%	1/4W	
R333	1-249-413-11	CARBON	470	5%	1/4W	
R335	1-249-408-11	CARBON	180	5%	1/4W	
R336	1-249-421-11	CARBON	2.2K	5%	1/4W	
R337	1-249-413-11	CARBON	470	5%	1/4W	
R338	1-249-426-11	CARBON	5.6K	5%	1/4W	
R339	1-249-417-11	CARBON	1K	5%	1/4W	
R340	1-249-417-11	CARBON	1K	5%	1/4W	
R341	1-249-413-11	CARBON	470	5%	1/4W	
R342	1-249-413-11	CARBON	470	5%	1/4W	
R343	1-249-417-11	CARBON	1K	5%	1/4W	
R344	1-249-411-11	CARBON	330	5%	1/4W	
R345	1-249-417-11	CARBON	1K	5%	1/4W	
R348	1-249-421-11	CARBON	2.2K	5%	1/4W	
R349	1-249-441-11	CARBON	100K	5%	1/4W	
R350	1-249-431-11	CARBON	15K	5%	1/4W	
R351	1-249-427-11	CARBON	6.8K	5%	1/4W	
R352	1-249-435-11	CARBON	33K	5%	1/4W	
R353	1-249-435-11	CARBON	33K	5%	1/4W	
R354	1-249-408-11	CARBON	180	5%	1/4W	
R355	1-249-421-11	CARBON	2.2K	5%	1/4W	
R356	1-249-423-11	CARBON	3.3K	5%	1/4W	
R357	1-249-413-11	CARBON	470	5%	1/4W	
R358	1-249-429-11	CARBON	10K	5%	1/4W	
R359	1-249-425-11	CARBON	4.7K	5%	1/4W	
R360	1-249-433-11	CARBON	22K	5%	1/4W	
R361	1-249-421-11	CARBON	2.2K	5%	1/4W	
R362	1-249-413-11	CARBON	470	5%	1/4W	
R363	1-249-423-11	CARBON	3.3K	5%	1/4W	
R364	1-215-437-00	METAL	4.7K	1%	1/6W	
R365	1-215-425-00	METAL	1.5K	1%	1/6W	
R366	1-249-425-11	CARBON	4.7K	5%	1/4W	
R368	1-249-421-11	CARBON	2.2K	5%	1/4W	
R369	1-249-413-11	CARBON	470	5%	1/4W	
R370	1-249-411-11	CARBON	330	5%	1/4W	
R371	1-249-416-11	CARBON	820	5%	1/4W	
R372	1-249-417-11	CARBON	1K	5%	1/4W	
R373	1-249-417-11	CARBON	1K	5%	1/4W	
R374	1-249-416-11	CARBON	820	5%	1/4W	
R375	1-249-419-11	CARBON	1.5K	5%	1/4W	
R376	1-249-409-11	CARBON	220	5%	1/4W	
R377	1-249-413-11	CARBON	470	5%	1/4W	
R378	1-249-421-11	CARBON	2.2K	5%	1/4W	
R379	1-249-405-11	CARBON	100	5%	1/4W	
R380	1-249-409-11	CARBON	220	5%	1/4W	
R381	1-249-415-11	CARBON	680	5%	1/4W	
R382	1-249-421-11	CARBON	2.2K	5%	1/4W	
R383	1-249-411-11	CARBON	330	5%	1/4W	
R384	1-249-416-11	CARBON	820	5%	1/4W	
R385	1-249-416-11	CARBON	820	5%	1/4W	
R387	1-249-417-11	CARBON	1K	5%	1/4W	
R389	1-249-413-11	CARBON	470	5%	1/4W	
R390	1-249-421-11	CARBON	2.2K	5%	1/4W	
R391	1-249-421-11	CARBON	2.2K	5%	1/4W	
R392	1-249-426-11	CARBON	5.6K	5%	1/4W	
R393	1-249-425-11	CARBON	4.7K	5%	1/4W	
R394	1-249-413-11	CARBON	470	5%	1/4W	
R395	1-249-413-11	CARBON	470	5%	1/4W	
R396	1-249-421-11	CARBON	2.2K	5%	1/4W	
R397	1-249-417-11	CARBON	1K	5%	1/4W	
R398	1-215-421-00	METAL	1K	1%	1/6W	
R399	1-215-421-00	METAL	1K	1%	1/6W	
R400	1-249-429-11	CARBON	10K	5%	1/4W	
R401	1-249-413-11	CARBON	470	5%	1/4W	
R402	1-249-429-11	CARBON	10K	5%	1/4W	
R403	1-249-433-11	CARBON	22K	5%	1/4W	
R404	1-249-421-11	CARBON	2.2K	5%	1/4W	
R405	1-249-417-11	CARBON	1K	5%	1/4W	
R406	1-249-421-11	CARBON	2.2K	5%	1/4W	
R407	1-249-411-11	CARBON	330	5%	1/4W	
R408	1-249-417-11	CARBON	1K	5%	1/4W	
R409	1-249-415-11	CARBON	680	5%	1/4W	
R410	1-249-406-11	CARBON	120	5%	1/4W	
R411	1-249-421-11	CARBON	2.2K	5%	1/4W	
R413	1-249-421-11	CARBON	2.2K	5%	1/4W	
R414	1-249-416-11	CARBON	820	5%	1/4W	
R415	1-249-421-11	CARBON	2.2K	5%	1/4W	
R416	1-249-406-11	CARBON	120	5%	1/4W	
R417	1-249-421-11	CARBON	2.2K	5%	1/4W	

When indicating parts by reference number, please include the board name.

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Ref.No	Part No.	Description				Remark
R418	1-249-418-11	CARBON	1.2K	5%	1/4W	
R419	1-247-903-00	CARBON	1M	5%	1/4W	
R420	1-247-903-00	CARBON	1M	5%	1/4W	
R421	1-249-417-11	CARBON	1K	5%	1/4W	
R422	1-249-417-11	CARBON	1K	5%	1/4W	
R423	1-249-417-11	CARBON	1K	5%	1/4W	
R424	1-249-417-11	CARBON	1K	5%	1/4W	
R425	1-249-427-11	CARBON	6.8K	5%	1/4W	
R426	1-249-429-11	CARBON	10K	5%	1/4W	
R427	1-249-429-11	CARBON	10K	5%	1/4W	
R428	1-249-431-11	CARBON	15K	5%	1/4W	
R429	1-249-429-11	CARBON	10K	5%	1/4W	
R430	1-249-417-11	CARBON	1K	5%	1/4W	
R431	1-249-421-11	CARBON	2.2K	5%	1/4W	
R432	1-249-419-11	CARBON	1.5K	5%	1/4W	
R433	1-249-421-11	CARBON	2.2K	5%	1/4W	
R435	1-249-415-11	CARBON	680	5%	1/4W	
R436	1-249-413-11	CARBON	470	5%	1/4W	
R437	1-249-408-11	CARBON	180	5%	1/4W	
R438	1-249-421-11	CARBON	2.2K	5%	1/4W	
R439	1-249-411-11	CARBON	330	5%	1/4W	
R440	1-249-413-11	CARBON	470	5%	1/4W	
R441	1-249-423-11	CARBON	3.3K	5%	1/4W	
R442	1-249-417-11	CARBON	1K	5%	1/4W	
R443	1-249-423-11	CARBON	3.3K	5%	1/4W	
R444	1-249-417-11	CARBON	1K	5%	1/4W	
R445	1-249-435-11	CARBON	33K	5%	1/4W	
R446	1-249-429-11	CARBON	10K	5%	1/4W	
R449	1-249-435-11	CARBON	33K	5%	1/4W	
R450	1-249-431-11	CARBON	15K	5%	1/4W	
R451	1-249-417-11	CARBON	1K	5%	1/4W	
R452	1-249-417-11	CARBON	1K	5%	1/4W	
R453	1-249-417-11	CARBON	1K	5%	1/4W	
R454	1-249-413-11	CARBON	470	5%	1/4W	
R455	1-249-417-11	CARBON	1K	5%	1/4W	
R456	1-249-417-11	CARBON	1K	5%	1/4W	
R457	1-249-413-11	CARBON	470	5%	1/4W	
R458	1-249-413-11	CARBON	470	5%	1/4W	
R459	1-249-417-11	CARBON	1K	5%	1/4W	
R460	1-249-435-11	CARBON	33K	5%	1/4W	
R461	1-249-431-11	CARBON	15K	5%	1/4W	
R462	1-249-411-11	CARBON	330	5%	1/4W	
R463	1-249-415-11	CARBON	680	5%	1/4W	
R464	1-249-417-11	CARBON	1K	5%	1/4W	
R465	1-249-423-11	CARBON	3.3K	5%	1/4W	
R466	1-249-413-11	CARBON	470	5%	1/4W	
R467	1-249-421-11	CARBON	2.2K	5%	1/4W	
R468	1-249-421-11	CARBON	2.2K	5%	1/4W	
R469	1-249-431-11	CARBON	15K	5%	1/4W	
R470	1-249-429-11	CARBON	10K	5%	1/4W	
R471	1-249-431-11	CARBON	15K	5%	1/4W	
R472	1-249-425-11	CARBON	4.7K	5%	1/4W	
R473	1-249-419-11	CARBON	1.5K	5%	1/4W	

Ref.No	Part No.	Description				Remark
R474	1-249-417-11	CARBON	1K	5%	1/4W	
R475	1-249-417-11	CARBON	1K	5%	1/4W	
R476	1-249-425-11	CARBON	4.7K	5%	1/4W	
R477	1-249-431-11	CARBON	15K	5%	1/4W	
R478	1-249-413-11	CARBON	470	5%	1/4W	
R479	1-249-421-11	CARBON	2.2K	5%	1/4W	
R480	1-249-433-11	CARBON	22K	5%	1/4W	
R481	1-249-425-11	CARBON	4.7K	5%	1/4W	
R482	1-249-411-11	CARBON	330	5%	1/4W	
R483	1-249-417-11	CARBON	1K	5%	1/4W	
R484	1-249-417-11	CARBON	1K	5%	1/4W	
R485	1-249-411-11	CARBON	330	5%	1/4W	
R486	1-249-413-11	CARBON	470	5%	1/4W	
R487	1-249-423-11	CARBON	3.3K	5%	1/4W	
R488	1-249-413-11	CARBON	470	5%	1/4W	
R489	1-215-445-00	METAL	10K	1%	1/6W	
R490	1-215-445-00	METAL	10K	1%	1/6W	
R491	1-249-419-11	CARBON	1.5K	5%	1/4W	
R492	1-249-413-11	CARBON	470	5%	1/4W	
R493	1-249-419-11	CARBON	1.5K	5%	1/4W	
R494	1-249-413-11	CARBON	470	5%	1/4W	
R495	1-249-421-11	CARBON	2.2K	5%	1/4W	
R496	1-215-421-00	METAL	1K	1%	1/6W	
R497	1-215-421-00	METAL	1K	1%	1/6W	
R498	1-249-421-11	CARBON	2.2K	5%	1/4W	
R499	1-249-421-11	CARBON	2.2K	5%	1/4W	
R500	1-249-417-11	CARBON	1K	5%	1/4W	
R501	1-249-418-11	CARBON	1.2K	5%	1/4W	
R502	1-249-417-11	CARBON	1K	5%	1/4W	
R503	1-249-429-11	CARBON	10K	5%	1/4W	
R504	1-249-431-11	CARBON	15K	5%	1/4W	
R505	1-249-427-11	CARBON	6.8K	5%	1/4W	
R506	1-249-427-11	CARBON	6.8K	5%	1/4W	
R507	1-249-431-11	CARBON	15K	5%	1/4W	
R508	1-249-417-11	CARBON	1K	5%	1/4W	
R509	1-249-417-11	CARBON	1K	5%	1/4W	
R510	1-249-429-11	CARBON	10K	5%	1/4W	
R511	1-249-423-11	CARBON	3.3K	5%	1/4W	
R512	1-249-413-11	CARBON	470	5%	1/4W	
R513	1-249-413-11	CARBON	470	5%	1/4W	
R514	1-249-417-11	CARBON	1K	5%	1/4W	
R515	1-249-411-11	CARBON	330	5%	1/4W	
R516	1-249-421-11	CARBON	2.2K	5%	1/4W	
R517	1-249-421-11	CARBON	2.2K	5%	1/4W	
R518	1-249-431-11	CARBON	15K	5%	1/4W	
R519	1-249-427-11	CARBON	6.8K	5%	1/4W	
R520	1-249-408-11	CARBON	180	5%	1/4W	
R521	1-249-423-11	CARBON	3.3K	5%	1/4W	
R522	1-249-413-11	CARBON	470	5%	1/4W	
R525	1-249-413-11	CARBON	470	5%	1/4W	
R526	1-249-421-11	CARBON	2.2K	5%	1/4W	
R527	1-249-417-11	CARBON	1K	5%	1/4W	
R530	1-249-413-11	CARBON	470	5%	1/4W	

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark
R531	1-249-441-11	CARBON 100K 5% 1/4W	
R553	1-249-409-11	CARBON 220 5% 1/4W	
R554	1-249-413-11	CARBON 470 5% 1/4W	
R555	1-249-411-11	CARBON 330 5% 1/4W	
R600	1-249-413-11	CARBON 470 5% 1/4W	
R601	1-249-421-11	CARBON 2.2K 5% 1/4W	
R602	1-249-421-11	CARBON 2.2K 5% 1/4W	
R603	1-249-413-11	CARBON 470 5% 1/4W	
R608	1-249-421-11	CARBON 2.2K 5% 1/4W	
R609	1-249-413-11	CARBON 470 5% 1/4W	
R610	1-249-429-11	CARBON 10K 5% 1/4W	
R900	1-247-804-11	CARBON 75 5% 1/4W	
		VARIABLE RESISTOR	
RV101	1-228-991-00	RES, ADJ, CARBON 2.2K	
RV102	1-228-990-00	RES, ADJ, CARBON 1K	
RV103	1-228-991-00	RES, ADJ, CARBON 2.2K	
RV104	1-228-994-00	RES, ADJ, METAL GLAZE 10K	
RV105	1-228-994-00	RES, ADJ, METAL GLAZE 10K	
RV201	1-228-991-00	RES, ADJ, CARBON 2.2K	
RV202	1-228-995-00	RES, ADJ, CARBON 22K	
RV301	1-228-990-00	RES, ADJ, CARBON 1K	
RV302	1-228-990-00	RES, ADJ, METAL GLAZE 1K	
RV303	1-228-990-00	RES, ADJ, METAL GLAZE 1K	
RV304	1-228-990-00	RES, ADJ, METAL GLAZE 1K	
RV305	1-228-991-00	RES, ADJ, CARBON 2.2K	
RV306	1-228-991-00	RES, ADJ, CARBON 2.2K	
RV308	1-228-991-00	RES, ADJ, CARBON 2.2K	
RV314	1-228-990-00	RES, ADJ, CARBON 1K	
RV315	1-228-991-00	RES, ADJ, CARBON 2.2K	
RV316	1-228-991-00	RES, ADJ, METAL GLAZE 2.2K	
RV317	1-228-993-00	RES, ADJ, CARBON 4.7K	
RV318	1-228-991-00	RES, ADJ, CARBON 2.2K	
RV334	1-228-991-00	RES, ADJ, CARBON 2.2K	
RV400	1-228-991-00	RES, ADJ, CARBON 2.2K	
		RELAY	
RY201	1-515-529-11	RELAY	
RY202	1-515-529-11	RELAY	
		CRYSTAL	
X201	1-527-723-00	VIBRATOR, CRYSTAL (14.1875MHz)	
X202	1-567-733-11	VIBRATOR, CRYSTAL (17.73MHz)	

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Ref.No	Part No.	Description	Remark
	*A-7061-749-A	WF-1 BOARD, COMPLETE	
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	*2-128-437-01	HOLDER (3), PC BOARD	
	*2-382-687-11	HOLDER (2), PC BOARD	
	3-657-842-01	SPACER (3X4)	
	*3-710-565-01	HINGE, PC BOARD	
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
		CAPACITOR	
C001	1-124-927-11	ELECT 4.7MF 20% 50V	
C002	1-124-927-11	ELECT 4.7MF 20% 50V	
C003	1-126-233-11	ELECT 22MF 20% 25V	
C004	1-126-233-11	ELECT 22MF 20% 25V	
C005	1-123-875-11	ELECT 10MF 20% 50V	
C006	1-161-379-00	CERAMIC 0.01MF 30% 16V	
C007	1-130-477-00	FILM 0.0033MF 5% 50V	
C008	1-161-379-00	CERAMIC 0.01MF 30% 16V	
C009	1-161-379-00	CERAMIC 0.01MF 30% 16V	
C010	1-161-379-00	CERAMIC 0.01MF 30% 16V	
C011	1-124-446-11	ELECT 47MF 20% 10V	
C012	1-161-057-00	CERAMIC 0.033MF 10% 25V	
C013	1-161-057-00	CERAMIC 0.033MF 10% 25V	
C014	1-161-057-00	CERAMIC 0.033MF 10% 25V	
C114	1-161-379-00	CERAMIC 0.01MF 30% 16V	
C115	1-124-477-11	ELECT 47MF 20% 16V	
C201	1-161-379-00	CERAMIC 0.01MF 30% 16V	
C202	1-161-379-00	CERAMIC 0.01MF 30% 16V	
C203	1-162-851-11	CERAMIC 0.1MF 10% 16V	
C204	1-161-379-00	CERAMIC 0.01MF 30% 16V	
C205	1-161-379-00	CERAMIC 0.01MF 30% 16V	
C206	1-102-822-00	CERAMIC 390PF 5% 50V	
C207	1-162-851-11	CERAMIC 0.1MF 10% 16V	
C208	1-162-851-11	CERAMIC 0.1MF 10% 16V	
C209	1-130-477-00	FILM 0.0033MF 5% 50V	
C210	1-161-379-00	CERAMIC 0.01MF 30% 16V	
C211	1-123-875-11	ELECT 10MF 20% 50V	
C212	1-161-379-00	CERAMIC 0.01MF 30% 16V	
C213	1-161-379-00	CERAMIC 0.01MF 30% 16V	
C214	1-161-379-00	CERAMIC 0.01MF 30% 16V	
C215	1-124-477-11	ELECT 47MF 20% 16V	
C216	1-161-379-00	CERAMIC 0.01MF 30% 16V	
C217	1-124-477-11	ELECT 47MF 20% 16V	
C218	1-123-875-11	ELECT 10MF 20% 50V	
C220	1-102-973-00	CERAMIC 100PF 5% 50V	
C221	1-102-973-00	CERAMIC 100PF 5% 50V	
C222	1-124-477-11	ELECT 47MF 20% 16V	
C223	1-161-379-00	CERAMIC 0.01MF 30% 16V	
C224	1-161-379-00	CERAMIC 0.01MF 30% 16V	
C225	1-124-477-11	ELECT 47MF 20% 16V	
C226	1-161-379-00	CERAMIC 0.01MF 30% 16V	
C227	1-124-477-11	ELECT 47MF 20% 16V	
C250	1-124-477-11	ELECT 47MF 20% 16V	
C251	1-124-477-11	ELECT 47MF 20% 16V	

When indicating parts by reference number, please include the board name.

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Ref.No	Part No.	Description			Remark
C252	1-161-379-00	CERAMIC	0.01MF	30%	16V
C307	1-161-379-00	CERAMIC	0.01MF	30%	16V
C308	1-123-875-11	ELECT	10MF	20%	50V
C335	1-161-379-00	CERAMIC	0.01MF	30%	16V
C336	1-123-875-11	ELECT	10MF	20%	50V
C401	1-161-379-00	CERAMIC	0.01MF	30%	16V
C402	1-123-875-11	ELECT	10MF	20%	50V
C403	1-161-379-00	CERAMIC	0.01MF	30%	16V
C404	1-123-875-11	ELECT	10MF	20%	50V
C405	1-161-379-00	CERAMIC	0.01MF	30%	16V
C501	1-124-477-11	ELECT	47MF	20%	16V
C502	1-124-477-11	ELECT	47MF	20%	16V
C503	1-123-875-11	ELECT	10MF	20%	50V
C504	1-161-379-00	CERAMIC	0.01MF	30%	16V
C505	1-123-875-11	ELECT	10MF	20%	50V
C506	1-161-379-00	CERAMIC	0.01MF	30%	16V
C507	1-123-875-11	ELECT	10MF	20%	50V
C508	1-161-379-00	CERAMIC	0.01MF	30%	16V
C509	1-124-477-11	ELECT	47MF	20%	16V
C510	1-123-875-11	ELECT	10MF	20%	50V
C511	1-123-875-11	ELECT	10MF	20%	50V
C512	1-123-875-11	ELECT	10MF	20%	50V
C513	1-161-051-00	CERAMIC	0.01MF	10%	25V
C601	1-124-464-11	ELECT	0.22MF	20%	50V
C602	1-123-875-11	ELECT	10MF	20%	50V
C603	1-123-875-11	ELECT	10MF	20%	50V
C604	1-124-443-00	ELECT	100MF	20%	10V
C605	1-161-379-00	CERAMIC	0.01MF	30%	16V
C606	1-161-379-00	CERAMIC	0.01MF	30%	16V
C607	1-161-379-00	CERAMIC	0.01MF	30%	16V
C608	1-161-379-00	CERAMIC	0.01MF	30%	16V
C609	1-124-443-00	ELECT	100MF	20%	10V
C610	1-124-443-00	ELECT	100MF	20%	10V
C611	1-124-443-00	ELECT	100MF	20%	10V
C614	1-124-902-00	ELECT	0.47MF	20%	50V
C616	1-123-875-11	ELECT	10MF	20%	50V
C617	1-124-902-00	ELECT	0.47MF	20%	50V
C619	1-123-875-11	ELECT	10MF	20%	50V
C620	1-124-464-11	ELECT	0.22MF	20%	50V
C622	1-123-875-11	ELECT	10MF	20%	50V
C623	1-124-902-00	ELECT	0.47MF	20%	50V
C625	1-123-875-11	ELECT	10MF	20%	50V
C628	1-124-902-00	ELECT	0.47MF	20%	50V
C630	1-123-875-11	ELECT	10MF	20%	50V
C634	1-124-499-11	ELECT	1MF	20%	50V
C635	1-161-379-00	CERAMIC	0.01MF	30%	16V
C636	1-161-379-00	CERAMIC	0.01MF	30%	16V
C637	1-161-379-00	CERAMIC	0.01MF	30%	16V
C638	1-161-379-00	CERAMIC	0.01MF	30%	16V
C639	1-124-443-00	ELECT	100MF	20%	10V
C640	1-124-443-00	ELECT	100MF	20%	10V
C641	1-162-851-11	CERAMIC	0.1MF	10%	16V
C643	1-161-379-00	CERAMIC	0.01MF	30%	16V

Ref.No	Part No.	Description			Remark
C645	1-124-902-00	ELECT	0.47MF	20%	50V
C647	1-123-875-11	ELECT	10MF	20%	50V
C648	1-124-902-00	ELECT	0.47MF	20%	50V
C651	1-124-464-11	ELECT	0.22MF	20%	50V
C655	1-124-902-00	ELECT	0.47MF	20%	50V
C657	1-123-875-11	ELECT	10MF	20%	50V
C658	1-124-902-00	ELECT	0.47MF	20%	50V
C660	1-124-120-11	ELECT	220MF	20%	16V
C661	1-124-464-11	ELECT	0.22MF	20%	50V
C662	1-124-464-11	ELECT	0.22MF	20%	50V
C663	1-102-963-00	CERAMIC	33PF	5%	50V
C666	1-161-379-00	CERAMIC	0.01MF	30%	16V
C667	1-124-477-11	ELECT	47MF	20%	16V
C668	1-124-477-11	ELECT	47MF	20%	16V
C669	1-123-875-11	ELECT	10MF	20%	50V
C670	1-161-379-00	CERAMIC	0.01MF	30%	16V
C671	1-123-875-11	ELECT	10MF	20%	50V
C672	1-161-379-00	CERAMIC	0.01MF	30%	16V
C673	1-123-875-11	ELECT	10MF	20%	50V
C674	1-161-379-00	CERAMIC	0.01MF	30%	16V
C675	1-123-875-11	ELECT	10MF	20%	50V
C676	1-161-379-00	CERAMIC	0.01MF	30%	16V
C680	1-102-973-00	CERAMIC	100PF	5%	50V
C681	1-102-973-00	CERAMIC	100PF	5%	50V
C682	1-102-951-00	CERAMIC	15PF	5%	50V
C800	1-102-961-00	CERAMIC	27PF	5%	50V
C803	1-161-379-00	CERAMIC	0.01MF	30%	16V
C813	1-126-101-11	ELECT	100MF	20%	16V
C814	1-161-379-00	CERAMIC	0.01MF	30%	16V
C815	1-126-233-11	ELECT	22MF	20%	25V
C816	1-124-443-00	ELECT	100MF	20%	10V
C817	1-124-477-11	ELECT	47MF	20%	16V
C818	1-123-875-11	ELECT	10MF	20%	50V
C819	1-123-875-11	ELECT	10MF	20%	50V
C820	1-124-473-11	ELECT	1000MF	20%	10V
C821	1-124-473-11	ELECT	1000MF	20%	10V
C822	1-124-902-00	ELECT	0.47MF	20%	50V
C823	1-124-902-00	ELECT	0.47MF	20%	50V
C824	1-124-499-11	ELECT	1MF	20%	50V
C825	1-124-499-11	ELECT	1MF	20%	50V
C828	1-124-902-00	ELECT	0.47MF	20%	50V
C829	1-124-902-00	ELECT	0.47MF	20%	50V
C830	1-161-379-00	CERAMIC	0.01MF	30%	16V
C831	1-124-119-00	ELECT	330MF	20%	16V
C832	1-161-379-00	CERAMIC	0.01MF	30%	16V
C833	1-126-101-11	ELECT	100MF	20%	16V
C841	1-123-875-11	ELECT	10MF	20%	50V
C926	1-123-875-11	ELECT	10MF	20%	50V
C927	1-124-902-00	ELECT	0.47MF	20%	50V
C962	1-126-101-11	ELECT	100MF	20%	16V
C991	1-102-959-00	CERAMIC	22PF	5%	50V
C992	1-124-499-11	ELECT	1MF	20%	50V
C993	1-161-379-00	CERAMIC	0.01MF	30%	16V

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description				Remark
C994	1-162-851-11	CERAMIC	0.1MF	10%	16V	
C995	1-124-499-11	ELECT	1MF	20%	50V	
C996	1-161-379-00	CERAMIC	0.01MF	30%	16V	
C997	1-124-477-11	ELECT	47MF	20%	16V	
C998	1-124-477-11	ELECT	47MF	20%	16V	
		CONNECTOR				
CN001	1-506-471-11	PIN, CONNECTOR 6P				
CN002	*1-564-005-21	PIN, CONNECTOR 6P				
CN107	1-506-471-11	PIN, CONNECTOR 6P				
CN109	1-506-471-11	PIN, CONNECTOR 6P				
CN116	*1-560-893-00	PIN, CONNECTOR 5P				
CN123	1-506-473-11	PIN, CONNECTOR 8P				
CN125	1-506-467-11	PIN, CONNECTOR 2P				
CN131	1-506-469-11	PIN, CONNECTOR 4P				
CN134	*1-564-001-31	PIN, CONNECTOR 2P				
CN201	*1-564-009-41	PIN, CONNECTOR 10P				
CN202	1-506-468-11	PIN, CONNECTOR 3P				
CN204	1-506-468-11	PIN, CONNECTOR 3P				
CN205	*1-564-001-41	PIN, CONNECTOR 2P				
CN226	*1-564-001-21	PIN, CONNECTOR 2P				
CN304	1-506-469-11	PIN, CONNECTOR 4P				
CN306	1-506-469-11	PIN, CONNECTOR 4P				
		DIODE				
D001	8-719-911-19	DIODE 1SS119				
D002	8-719-911-19	DIODE 1SS119				
D003	8-719-911-19	DIODE 1SS119				
D004	8-719-911-19	DIODE 1SS119				
D005	8-719-911-19	DIODE 1SS119				
D006	8-719-911-19	DIODE 1SS119				
D007	8-719-911-19	DIODE 1SS119				
D008	8-719-911-19	DIODE 1SS119				
D009	8-719-911-19	DIODE 1SS119				
D010	8-719-911-19	DIODE 1SS119				
D011	8-719-911-19	DIODE 1SS119				
D123	8-719-911-19	DIODE 1SS119				
D130	8-719-911-19	DIODE 1SS119				
D201	8-719-118-21	DIODE 1SS283				
D202	8-719-118-21	DIODE 1SS283				
D203	8-719-911-19	DIODE 1SS119				
D401	8-719-911-19	DIODE 1SS119				
D402	8-719-911-19	DIODE 1SS119				
D403	8-719-911-19	DIODE 1SS119				
D404	8-719-911-19	DIODE 1SS119				
D405	8-719-911-19	DIODE 1SS119				
D501	8-719-911-19	DIODE 1SS119				
D502	8-719-911-19	DIODE 1SS119				
D503	8-719-911-19	DIODE 1SS119				
D504	8-719-911-19	DIODE 1SS119				
D505	8-719-911-19	DIODE 1SS119				
D507	8-719-911-19	DIODE 1SS119				
D600	8-719-911-19	DIODE 1SS119				

Ref.No	Part No.	Description		Remark
D701	8-719-911-19	DIODE 1SS119		
D800	8-719-911-19	DIODE 1SS119		
D991	8-719-911-19	DIODE 1SS119		
		DELAY LINE		
DL201	1-415-282-31	DELAY LINE		
		FILTER		
FL601	1-409-468-11	COIL, TRAP		
FL602	1-415-643-11	DL		
		IC		
IC001	8-759-901-74	IC SN74LS174N		
IC002	8-759-291-30	IC TC9130P		
IC003	8-759-202-11	IC TC74HC00P		
IC004	8-759-291-30	IC TC9130P		
IC105	8-759-901-74	IC SN74LS174N		
IC106	8-759-901-23	IC SN74LS123N		
IC107	8-759-208-10	IC TC4053BPHB		
IC302	8-759-208-10	IC TC4053BPHB		
IC401	8-759-135-80	IC UPC358C		
IC501	8-759-140-53	IC UPD4053BC		
IC502	8-759-140-53	IC UPD4053BC		
IC503	8-759-340-13	IC HD14013BP		
IC504	8-759-132-40	IC UPC324C		
IC505	8-759-345-38	IC HD14538BP		
IC601	8-759-602-06	IC M5109P		
IC602	8-752-006-12	IC CX20061		
IC603	8-752-006-12	IC CX20061		
IC604	8-752-006-12	IC CX20061		
IC605	8-759-602-06	IC M5109P		
IC606	8-752-006-12	IC CX20061		
IC607	8-752-006-12	IC CX20061		
IC608	8-752-006-12	IC CX20061		
IC801	8-759-302-XX	IC CX20186		
IC802	8-759-030-67	IC MC14576AP		
IC991	8-752-006-12	IC CX20061		
		COIL		
L201	1-408-408-00	INDUCTOR	8.2UH	
L202	1-408-413-00	INDUCTOR	22UH	
L501	1-410-482-31	INDUCTOR	100UH	
L502	1-410-482-31	INDUCTOR	100UH	
L802	1-410-478-11	INDUCTOR	47UH	
L803	1-408-425-00	INDUCTOR	220UH	
L810	1-410-482-31	INDUCTOR	100UH	
		VARIABLE RESISTOR		
LV201	1-408-512-00	COIL (VARIABLE)	10UM	
LV202	1-408-520-00	COIL, VARIABLE	15UM	
LV203	1-408-520-00	COIL, VARIABLE	15UM	

When indicating parts by reference number, please include the board name.

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Ref.No	Part No.	Description	Remark
		TRANSISTOR	
Q001	8-729-900-61	TRANSISTOR DTA114ES	
Q002	8-729-900-61	TRANSISTOR DTA114ES	
Q003	8-729-900-80	TRANSISTOR DTC114ES	
Q201	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q202	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q203	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q204	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q205	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q206	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q207	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q208	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q209	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q210	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q211	8-729-173-38	TRANSISTOR 2SA733-K	
Q212	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q250	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q251	8-729-173-38	TRANSISTOR 2SA733-K	
Q252	8-729-173-38	TRANSISTOR 2SA733-K	
Q253	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q254	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q501	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q502	8-729-900-80	TRANSISTOR DTC114ES	
Q503	8-729-900-61	TRANSISTOR DTA114ES	
Q504	8-729-900-80	TRANSISTOR DTC114ES	
Q505	8-729-900-61	TRANSISTOR DTA114ES	
Q601	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q602	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q603	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q605	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q606	8-729-101-38	TRANSISTOR 2SC2785-E	
Q607	8-729-101-38	TRANSISTOR 2SC2785-E	
Q608	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q609	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q610	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q611	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q612	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q613	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q614	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q615	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q616	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q617	8-729-900-80	TRANSISTOR DTC114ES	
Q618	8-729-101-38	TRANSISTOR 2SC2785-E	
Q619	8-729-101-36	TRANSISTOR 2SC2785-H	
Q624	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q625	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q626	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q627	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q632	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q633	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q635	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q640	8-729-119-78	TRANSISTOR 2SC2785-HFE	

Ref.No	Part No.	Description	Remark
Q641	8-729-900-74	TRANSISTOR DTC143TS	
Q643	8-729-173-38	TRANSISTOR 2SA733-K	
Q644	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q645	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q646	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q647	8-729-173-38	TRANSISTOR 2SA733-K	
Q648	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q649	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q701	8-729-900-74	TRANSISTOR DTC143TS	
Q702	8-729-900-74	TRANSISTOR DTC143TS	
Q805	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q806	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q807	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q808	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q900	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q901	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q991	8-729-173-38	TRANSISTOR 2SC733-K	
Q992	8-729-119-78	TRANSISTOR 2SC2785-HFE	
		RESISTOR	
R001	1-249-429-11	CARBON 10K 5% 1/4W	
R002	1-249-429-11	CARBON 10K 5% 1/4W	
R003	1-249-421-11	CARBON 2.2K 5% 1/4W	
R004	1-249-422-11	CARBON 2.7K 5% 1/4W	
R005	1-249-421-11	CARBON 2.2K 5% 1/4W	
R006	1-249-422-11	CARBON 2.7K 5% 1/4W	
R007	1-249-429-11	CARBON 10K 5% 1/4W	
R008	1-249-431-11	CARBON 15K 5% 1/4W	
R009	1-249-417-11	CARBON 1K 5% 1/4W	
R010	1-249-417-11	CARBON 1K 5% 1/4W	
R201	1-249-429-11	CARBON 10K 5% 1/4W	
R202	1-249-425-11	CARBON 4.7K 5% 1/4W	
R203	1-249-413-11	CARBON 470 5% 1/4W	
R204	1-249-413-11	CARBON 470 5% 1/4W	
R205	1-249-417-11	CARBON 1K 5% 1/4W	
R206	1-249-413-11	CARBON 470 5% 1/4W	
R207	1-249-429-11	CARBON 10K 5% 1/4W	
R208	1-249-425-11	CARBON 4.7K 5% 1/4W	
R209	1-249-412-11	CARBON 390 5% 1/4W	
R210	1-249-412-11	CARBON 390 5% 1/4W	
R211	1-249-412-11	CARBON 390 5% 1/4W	
R212	1-249-412-11	CARBON 390 5% 1/4W	
R213	1-249-412-11	CARBON 390 5% 1/4W	
R214	1-249-432-11	CARBON 18K 5% 1/4W	
R215	1-249-428-11	CARBON 8.2K 5% 1/4W	
R216	1-249-418-11	CARBON 1.2K 5% 1/4W	
R217	1-249-412-11	CARBON 390 5% 1/4W	
R218	1-249-409-11	CARBON 220 5% 1/4W	
R219	1-249-413-11	CARBON 470 5% 1/4W	
R220	1-249-416-11	CARBON 820 5% 1/4W	
R221	1-249-411-11	CARBON 330 5% 1/4W	
R222	1-249-413-11	CARBON 470 5% 1/4W	
R223	1-249-411-11	CARBON 330 5% 1/4W	

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Ref.No	Part No.	Description				Remark
R224	1-249-417-11	CARBON	1K	5%	1/4W	
R225	1-249-423-11	CARBON	3.3K	5%	1/4W	
R226	1-249-420-11	CARBON	1.8K	5%	1/4W	
R227	1-249-417-11	CARBON	1K	5%	1/4W	
R228	1-249-419-11	CARBON	1.5K	5%	1/4W	
R229	1-249-417-11	CARBON	1K	5%	1/4W	
R230	1-249-418-11	CARBON	1.2K	5%	1/4W	
R232	1-249-425-11	CARBON	4.7K	5%	1/4W	
R233	1-249-413-11	CARBON	470	5%	1/4W	
R234	1-249-413-11	CARBON	470	5%	1/4W	
R235	1-249-406-11	CARBON	120	5%	1/4W	
R237	1-249-413-11	CARBON	470	5%	1/4W	
R238	1-249-411-11	CARBON	330	5%	1/4W	
R240	1-249-413-11	CARBON	470	5%	1/4W	
R251	1-249-435-11	CARBON	33K	5%	1/4W	
R252	1-249-429-11	CARBON	10K	5%	1/4W	
R253	1-249-417-11	CARBON	1K	5%	1/4W	
R254	1-249-413-11	CARBON	470	5%	1/4W	
R255	1-249-413-11	CARBON	470	5%	1/4W	
R256	1-249-417-11	CARBON	1K	5%	1/4W	
R257	1-249-413-11	CARBON	470	5%	1/4W	
R258	1-249-421-11	CARBON	2.2K	5%	1/4W	
R259	1-249-421-11	CARBON	2.2K	5%	1/4W	
R260	1-249-429-11	CARBON	10K	5%	1/4W	
R261	1-249-429-11	CARBON	10K	5%	1/4W	
R262	1-249-421-11	CARBON	2.2K	5%	1/4W	
R401	1-249-428-11	CARBON	8.2K	5%	1/4W	
R402	1-249-422-11	CARBON	2.7K	5%	1/4W	
R403	1-249-419-11	CARBON	1.5K	5%	1/4W	
R404	1-249-419-11	CARBON	1.5K	5%	1/4W	
R405	1-249-422-11	CARBON	2.7K	5%	1/4W	
R406	1-249-427-11	CARBON	6.8K	5%	1/4W	
R407	1-249-429-11	CARBON	10K	5%	1/4W	
R408	1-247-872-11	CARBON	51K	5%	1/4W	
R409	1-249-429-11	CARBON	10K	5%	1/4W	
R410	1-249-432-11	CARBON	18K	5%	1/4W	
R411	1-249-422-11	CARBON	2.7K	5%	1/4W	
R412	1-249-429-11	CARBON	10K	5%	1/4W	
R413	1-247-872-11	CARBON	51K	5%	1/4W	
R414	1-249-431-11	CARBON	15K	5%	1/4W	
R415	1-249-439-11	CARBON	68K	5%	1/4W	
R416	1-249-413-11	CARBON	470	5%	1/4W	
R501	1-249-428-11	CARBON	8.2K	5%	1/4W	
R502	1-249-432-11	CARBON	18K	5%	1/4W	
R503	1-249-435-11	CARBON	33K	5%	1/4W	
R505	1-249-425-11	CARBON	4.7K	5%	1/4W	
R507	1-249-435-11	CARBON	33K	5%	1/4W	
R508	1-249-435-11	CARBON	33K	5%	1/4W	
R509	1-249-428-11	CARBON	8.2K	5%	1/4W	
R510	1-249-428-11	CARBON	8.2K	5%	1/4W	
R511	1-249-429-11	CARBON	10K	5%	1/4W	
R512	1-249-435-11	CARBON	33K	5%	1/4W	
R513	1-249-429-11	CARBON	10K	5%	1/4W	

Ref.No	Part No.	Description				Remark
R514	1-249-435-11	CARBON	33K	5%	1/4W	
R515	1-249-441-11	CARBON	100K	5%	1/4W	
R516	1-249-429-11	CARBON	10K	5%	1/4W	
R517	1-249-431-11	CARBON	15K	5%	1/4W	
R518	1-249-441-11	CARBON	100K	5%	1/4W	
R519	1-249-425-11	CARBON	4.7K	5%	1/4W	
R520	1-249-433-11	CARBON	22K	5%	1/4W	
R521	1-249-417-11	CARBON	1K	5%	1/4W	
R523	1-249-441-11	CARBON	100K	5%	1/4W	
R524	1-249-429-11	CARBON	10K	5%	1/4W	
R525	1-249-433-11	CARBON	22K	5%	1/4W	
R526	1-249-409-11	CARBON	220	5%	1/4W	
R527	1-249-433-11	CARBON	22K	5%	1/4W	
R528	1-247-891-00	CARBON	330K	5%	1/4W	
R529	1-249-420-11	CARBON	1.8K	5%	1/4W	
R582	1-249-425-11	CARBON	4.7K	5%	1/4W	
R601	1-249-426-11	CARBON	5.6K	5%	1/4W	
R602	1-249-433-11	CARBON	22K	5%	1/4W	
R603	1-249-417-11	CARBON	1K	5%	1/4W	
R604	1-249-417-11	CARBON	1K	5%	1/4W	
R605	1-249-417-11	CARBON	1K	5%	1/4W	
R606	1-249-421-11	CARBON	2.2K	5%	1/4W	
R607	1-249-416-11	CARBON	820	5%	1/4W	
R608	1-249-417-11	CARBON	1K	5%	1/4W	
R609	1-249-421-11	CARBON	2.2K	5%	1/4W	
R611	1-249-411-11	CARBON	330	5%	1/4W	
R612	1-249-409-11	CARBON	220	5%	1/4W	
R614	1-249-416-11	CARBON	820	5%	1/4W	
R615	1-249-417-11	CARBON	1K	5%	1/4W	
R620	1-249-417-11	CARBON	1K	5%	1/4W	
R621	1-249-413-11	CARBON	470	5%	1/4W	
R622	1-249-417-11	CARBON	1K	5%	1/4W	
R623	1-249-413-11	CARBON	470	5%	1/4W	
R624	1-215-437-00	METAL	4.7K	1%	1/6W	
R625	1-249-433-11	CARBON	22K	5%	1/4W	
R626	1-249-437-11	CARBON	47K	5%	1/4W	
R629	1-215-437-00	METAL	4.7K	1%	1/6W	
R630	1-249-417-11	CARBON	1K	5%	1/4W	
R631	1-249-415-11	CARBON	680	5%	1/4W	
R632	1-249-413-11	CARBON	470	5%	1/4W	
R633	1-249-433-11	CARBON	22K	5%	1/4W	
R634	1-249-413-11	CARBON	470	5%	1/4W	
R635	1-249-433-11	CARBON	22K	5%	1/4W	
R636	1-249-426-11	CARBON	5.6K	5%	1/4W	
R637	1-249-426-11	CARBON	5.6K	5%	1/4W	
R638	1-249-421-11	CARBON	2.2K	5%	1/4W	
R639	1-249-425-11	CARBON	4.7K	5%	1/4W	
R640	1-249-433-11	CARBON	22K	5%	1/4W	
R641	1-249-437-11	CARBON	47K	5%	1/4W	
R644	1-249-425-11	CARBON	4.7K	5%	1/4W	
R645	1-249-415-11	CARBON	680	5%	1/4W	
R647	1-249-433-11	CARBON	22K	5%	1/4W	
R648	1-249-413-11	CARBON	470	5%	1/4W	

When indicating parts by reference number, please include the board name.

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Ref.No	Part No.	Description				Remark
R649	1-249-433-11	CARBON	22K	5%	1/4W	
R650	1-249-426-11	CARBON	5.6K	5%	1/4W	
R651	1-249-426-11	CARBON	5.6K	5%	1/4W	
R652	1-249-421-11	CARBON	2.2K	5%	1/4W	
R654	1-249-417-11	CARBON	1K	5%	1/4W	
R655	1-249-425-11	CARBON	4.7K	5%	1/4W	
R656	1-249-433-11	CARBON	22K	5%	1/4W	
R657	1-249-437-11	CARBON	47K	5%	1/4W	
R659	1-249-417-11	CARBON	1K	5%	1/4W	
R660	1-249-415-11	CARBON	680	5%	1/4W	
R672	1-249-421-11	CARBON	2.2K	5%	1/4W	
R673	1-249-421-11	CARBON	2.2K	5%	1/4W	
R674	1-249-416-11	CARBON	820	5%	1/4W	
R675	1-249-421-11	CARBON	2.2K	5%	1/4W	
R676	1-249-411-11	CARBON	330	5%	1/4W	
R677	1-249-417-11	CARBON	1K	5%	1/4W	
R679	1-249-413-11	CARBON	470	5%	1/4W	
R680	1-249-409-11	CARBON	220	5%	1/4W	
R682	1-249-416-11	CARBON	820	5%	1/4W	
R684	1-249-421-11	CARBON	2.2K	5%	1/4W	
R686	1-249-421-11	CARBON	2.2K	5%	1/4W	
R687	1-249-421-11	CARBON	2.2K	5%	1/4W	
R688	1-249-431-11	CARBON	15K	5%	1/4W	
R689	1-249-429-11	CARBON	10K	5%	1/4W	
R690	1-249-417-11	CARBON	1K	5%	1/4W	
R691	1-249-413-11	CARBON	470	5%	1/4W	
R692	1-249-417-11	CARBON	1K	5%	1/4W	
R694	1-249-433-11	CARBON	22K	5%	1/4W	
R695	1-249-437-11	CARBON	47K	5%	1/4W	
R696	1-249-429-11	CARBON	10K	5%	1/4W	
R697	1-249-426-11	CARBON	5.6K	5%	1/4W	
R698	1-249-423-11	CARBON	3.3K	5%	1/4W	
R700	1-249-429-11	CARBON	10K	5%	1/4W	
R702	1-249-413-11	CARBON	470	5%	1/4W	
R706	1-249-421-11	CARBON	2.2K	5%	1/4W	
R707	1-249-425-11	CARBON	4.7K	5%	1/4W	
R708	1-249-433-11	CARBON	22K	5%	1/4W	
R709	1-249-437-11	CARBON	47K	5%	1/4W	
R715	1-249-413-11	CARBON	470	5%	1/4W	
R717	1-249-421-11	CARBON	2.2K	5%	1/4W	
R719	1-249-433-11	CARBON	22K	5%	1/4W	
R720	1-249-437-11	CARBON	47K	5%	1/4W	
R721	1-249-429-11	CARBON	10K	5%	1/4W	
R722	1-249-426-11	CARBON	5.6K	5%	1/4W	
R723	1-249-423-11	CARBON	3.3K	5%	1/4W	
R725	1-249-429-11	CARBON	10K	5%	1/4W	
R726	1-249-433-11	CARBON	22K	5%	1/4W	
R727	1-249-429-11	CARBON	10K	5%	1/4W	
R728	1-249-417-11	CARBON	1K	5%	1/4W	
R729	1-249-413-11	CARBON	470	5%	1/4W	
R730	1-249-417-11	CARBON	1K	5%	1/4W	
R731	1-249-421-11	CARBON	2.2K	5%	1/4W	
R732	1-249-413-11	CARBON	470	5%	1/4W	
R733	1-249-413-11	CARBON	470	5%	1/4W	
R734	1-249-417-11	CARBON	1K	5%	1/4W	
R735	1-249-417-11	CARBON	1K	5%	1/4W	
R736	1-249-413-11	CARBON	470	5%	1/4W	
R737	1-249-421-11	CARBON	2.2K	5%	1/4W	
R740	1-249-432-11	CARBON	18K	5%	1/4W	
R743	1-249-433-11	CARBON	22K	5%	1/4W	
R744	1-249-429-11	CARBON	10K	5%	1/4W	
R745	1-249-417-11	CARBON	1K	5%	1/4W	
R746	1-249-413-11	CARBON	470	5%	1/4W	
R747	1-249-417-11	CARBON	1K	5%	1/4W	
R748	1-249-413-11	CARBON	470	5%	1/4W	
R749	1-249-413-11	CARBON	470	5%	1/4W	
R750	1-249-421-11	CARBON	2.2K	5%	1/4W	
R751	1-249-417-11	CARBON	1K	5%	1/4W	
R752	1-249-417-11	CARBON	1K	5%	1/4W	
R753	1-249-413-11	CARBON	470	5%	1/4W	
R754	1-249-421-11	CARBON	2.2K	5%	1/4W	
R755	1-249-429-11	CARBON	10K	5%	1/4W	
R760	1-249-429-11	CARBON	10K	5%	1/4W	
R801	1-249-417-11	CARBON	1K	5%	1/4W	
R802	1-249-414-11	CARBON	560	5%	1/4W	
R810	1-249-429-11	CARBON	10K	5%	1/4W	
R811	1-249-410-11	CARBON	270	5%	1/4W	
R812	1-249-413-11	CARBON	470	5%	1/4W	
R813	1-249-416-11	CARBON	820	5%	1/4W	
R814	1-249-417-11	CARBON	1K	5%	1/4W	
R815	1-249-429-11	CARBON	10K	5%	1/4W	
R816	1-249-429-11	CARBON	10K	5%	1/4W	
R817	1-249-428-11	CARBON	8.2K	5%	1/4W	
R819	1-249-417-11	CARBON	1K	5%	1/4W	
R821	1-249-429-11	CARBON	10K	5%	1/4W	
R822	1-249-429-11	CARBON	10K	5%	1/4W	
R823	1-249-429-11	CARBON	10K	5%	1/4W	
R827	1-249-423-11	CARBON	3.3K	5%	1/4W	
R828	1-249-423-11	CARBON	3.3K	5%	1/4W	
R831	1-249-423-11	CARBON	3.3K	5%	1/4W	
R832	1-249-423-11	CARBON	3.3K	5%	1/4W	
R833	1-247-804-11	CARBON	75	5%	1/4W	
R834	1-247-804-11	CARBON	75	5%	1/4W	
R835	1-247-804-11	CARBON	75	5%	1/4W	
R836	1-247-804-11	CARBON	75	5%	1/4W	
R850	1-249-417-11	CARBON	1K	5%	1/4W	
R851	1-249-433-11	CARBON	22K	5%	1/4W	
R852	1-249-433-11	CARBON	22K	5%	1/4W	
R853	1-249-426-11	CARBON	5.6K	5%	1/4W	
R854	1-249-426-11	CARBON	5.6K	5%	1/4W	
R856	1-249-429-11	CARBON	10K	5%	1/4W	
R857	1-249-429-11	CARBON	10K	5%	1/4W	
R858	1-249-429-11	CARBON	10K	5%	1/4W	
R906	1-249-424-11	CARBON	3.9K	5%	1/4W	
R991	1-249-413-11	CARBON	470	5%	1/4W	
R992	1-249-417-11	CARBON	1K	5%	1/4W	

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description				Remark
R993	1-249-417-11	CARBON	1K	5%	1/4W	
R994	1-249-433-11	CARBON	22K	5%	1/4W	
R995	1-247-883-00	CARBON	150K	5%	1/4W	
R996	1-249-413-11	CARBON	470	5%	1/4W	
R997	1-249-421-11	CARBON	2.2K	5%	1/4W	

VARIABLE RESISTOR

RV001	1-228-994-00	RES, ADJ, CARBON 10K	
RV201	1-228-993-00	RES, ADJ, CARBON 4.7K	
RV203	1-228-994-00	RES, ADJ, CARBON 10K	
RV204	1-228-991-00	RES, ADJ, CARBON 2.2K	
RV205	1-228-991-00	RES, ADJ, CARBON 2.2K	
RV601	1-228-997-00	RES, ADJ, CARBON 100K	
RV602	1-228-990-00	RES, ADJ, CARBON 1K	
RV603	1-228-991-00	RES, ADJ, CARBON 2.2K	
RV604	1-228-991-00	RES, ADJ, CARBON 2.2K	
RV800	1-228-991-00	RES, ADJ, CARBON 2.2K	
RV802	1-228-991-00	RES, ADJ, CARBON 2.2K	
RV991	1-228-990-00	RES, ADJ, CARBON 1K	

RELAY

RY800	1-515-529-11	RELAY	

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*A-7061-750-A CA-16 BOARD, COMPLETE
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*2-352-113-01 CASE, SHIELD
*2-352-114-01 PLATE (A), SHIELD
*2-352-115-01 LID, SHIELD CASE

CAPACITOR

C101	1-124-584-00	ELECT	100MF	20%	10V	
C102	1-124-584-00	ELECT	100MF	20%	10V	
C103	1-124-584-00	ELECT	100MF	20%	10V	
C104	1-102-973-00	CERAMIC	100PF	5%	50V	
C105	1-102-973-00	CERAMIC	100PF	5%	50V	
C106	1-124-438-00	ELECT	1MF	20%	50V	
C107	1-162-851-11	CERAMIC	0.1MF	10%	16V	
C108	1-162-851-11	CERAMIC	0.1MF	10%	16V	
C109	1-162-851-11	CERAMIC	0.1MF	10%	16V	
C110	1-130-471-00	MYLAR	0.001MF	5%	50V	
C111	1-102-816-00	CERAMIC	120PF	5%	50V	
C112	1-130-471-00	MYLAR	0.001MF	5%	50V	
C113	1-124-584-00	ELECT	100MF	20%	10V	
C114	1-124-584-00	ELECT	100MF	20%	10V	
C115	1-102-973-00	CERAMIC	100PF	5%	50V	
C117	1-161-379-00	CERAMIC	0.01MF	30%	16V	
C118	1-161-379-00	CERAMIC	0.01MF	30%	16V	
C119	1-162-851-11	CERAMIC	0.1MF	10%	16V	
C120	1-162-851-11	CERAMIC	0.1MF	10%	16V	
C121	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C122	1-102-074-00	CERAMIC	0.001MF	10%	50V	

Ref.No	Part No.	Description				Remark
C123	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C124	1-130-477-00	FILM	0.0033MF	5%	50V	
C125	1-130-489-00	MYLAR	0.033MF	5%	50V	
C127	1-124-589-11	ELECT	47MF	20%	16V	
C128	1-126-163-11	ELECT	4.7MF	20%	50V	
C129	1-136-155-00	MYLAR	0.015MF	10%	50V	
C130	1-136-161-00	MYLAR	0.047MF	10%	50V	
C131	1-126-163-11	ELECT	4.7MF	20%	50V	
C132	1-136-155-00	MYLAR	0.015MF	10%	50V	
C133	1-130-473-00	MYLAR	0.0015MF	10%	50V	
C134	1-130-477-00	FILM	0.0033MF	5%	50V	
C135	1-126-176-11	ELECT	220MF	20%	10V	
C136	1-161-379-00	CERAMIC	0.01MF	30%	16V	
C138	1-130-481-00	MYLAR	0.0068MF	10%	50V	
C139	1-130-479-00	MYLAR	0.0047MF	10%	50V	
C141	1-102-959-00	CERAMIC	22PF	5%	50V	
C142	1-102-963-00	CERAMIC	33PF	5%	50V	
C145	1-161-379-00	CERAMIC	0.01MF	30%	16V	
C146	1-136-157-00	MYLAR	0.022MF	10%	50V	
C152	1-102-978-00	CERAMIC	220PF	5%	50V	
C153	1-102-978-00	CERAMIC	220PF	5%	50V	
C154	1-124-589-11	ELECT	47MF	20%	10V	
C155	1-124-589-11	ELECT	47MF	20%	10V	
C156	1-161-379-00	CERAMIC	0.01MF	30%	16V	
C158	1-102-114-00	CERAMIC	470PF	10%	50V	
C159	1-130-479-00	MYLAR	0.0047MF	10%	50V	
C160	1-102-114-00	CERAMIC	470PF	10%	50V	
C182	1-161-379-00	CERAMIC	0.01MF	30%	16V	
C191	1-124-589-11	ELECT	47MF	20%	10V	
C192	1-124-589-11	ELECT	47MF	20%	10V	
C205	1-124-584-00	ELECT	100MF	20%	10V	
C206	1-161-379-00	CERAMIC	0.01MF	30%	16V	
C601	1-124-438-00	ELECT	1MF	20%	50V	
C602	1-123-875-11	ELECT	10MF	20%	50V	
C604	1-126-101-11	ELECT	100MF	20%	16V	
C605	1-102-973-00	CERAMIC	100PF	5%	50V	
C608	1-102-973-00	CERAMIC	100PF	5%	50V	
C609	1-161-379-00	CERAMIC	0.01MF	30%	16V	
C610	1-123-875-11	ELECT	10MF	20%	50V	
C612	1-124-598-11	ELECT	22MF	20%	25V	
C613	1-126-163-11	ELECT	4.7MF	20%	50V	
C614	1-123-875-11	ELECT	10MF	20%	50V	
C615	1-123-875-11	ELECT	10MF	20%	50V	
C616	1-126-101-11	ELECT	100MF	20%	16V	
C617	1-123-875-11	ELECT	10MF	20%	50V	
C618	1-123-875-11	ELECT	10MF	20%	50V	
C619	1-123-875-11	ELECT	10MF	20%	50V	
C620	1-123-875-11	ELECT	10MF	20%	50V	
C621	1-123-875-11	ELECT	10MF	20%	50V	
C622	1-123-875-11	ELECT	10MF	20%	50V	
C623	1-126-163-11	ELECT	4.7MF	20%	50V	
C624	1-124-598-11	ELECT	22MF	20%	25V	
C625	1-123-875-11	ELECT	10MF	20%	50V	

When indicating parts by reference number, please include the board name.

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Ref.No	Part No.	Description			Remark
C626	1-123-875-11	ELECT	10MF	20%	50V
C627	1-161-379-00	CERAMIC	0.01MF	30%	16V
C628	1-123-875-11	ELECT	10MF	20%	50V
C629	1-123-875-11	ELECT	10MF	20%	50V
C630	1-123-875-11	ELECT	10MF	20%	50V
C631	1-102-978-00	CERAMIC	220PF	5%	50V
C632	1-123-875-11	ELECT	10MF	20%	50V
C633	1-102-978-00	CERAMIC	220PF	5%	50V
C635	1-161-379-00	CERAMIC	0.01MF	30%	16V
C636	1-123-875-11	ELECT	10MF	20%	50V
C637	1-124-598-11	ELECT	22MF	20%	25V
C638	1-126-163-11	ELECT	4.7MF	20%	50V
C640	1-124-584-00	ELECT	100MF	20%	10V
C641	1-123-875-11	ELECT	10MF	20%	50V
C642	1-123-875-11	ELECT	10MF	20%	50V
C644	1-123-875-11	ELECT	10MF	20%	50V
C645	1-124-598-11	ELECT	22MF	20%	25V
C646	1-126-163-11	ELECT	4.7MF	20%	50V
C647	1-123-875-11	ELECT	10MF	20%	50V
C648	1-123-875-11	ELECT	10MF	20%	50V
C649	1-123-875-11	ELECT	10MF	20%	50V
C650	1-123-875-11	ELECT	10MF	20%	50V
C651	1-161-379-00	CERAMIC	0.01MF	30%	16V
C652	1-123-875-11	ELECT	10MF	20%	50V
C653	1-162-851-11	CERAMIC	0.1MF	10%	16V
C654	1-126-176-11	ELECT	220MF	20%	10V
C655	1-162-851-11	CERAMIC	0.1MF	10%	16V
C656	1-126-176-11	ELECT	220MF	20%	10V
C657	1-161-379-00	CERAMIC	0.01MF	30%	16V
C658	1-123-875-11	ELECT	10MF	20%	50V
C659	1-123-875-11	ELECT	10MF	20%	50V
C661	1-123-875-11	ELECT	10MF	20%	50V
C664	1-126-176-11	ELECT	220MF	20%	10V
C670	1-161-051-00	CERAMIC	0.01MF	10%	25V
C699	1-161-772-11	CERAMIC	0.1MF	10%	25V
C701	1-124-584-00	ELECT	100MF	20%	10V
C702	1-161-379-00	CERAMIC	0.01MF	30%	16V
C703	1-101-361-00	CERAMIC	150PF	5%	50V
C704	1-101-361-00	CERAMIC	150PF	5%	50V
C708	1-131-347-00	TANTALUM	1MF	10%	25V
C709	1-124-438-00	ELECT	1MF	20%	50V
C710	1-161-379-00	CERAMIC	0.01MF	30%	16V
C711	1-161-379-00	CERAMIC	0.01MF	30%	16V
C712	1-124-261-00	ELECT	10MF	20%	50V
C713	1-131-499-91	TANTALUM	1.5MF	10%	20V
C714	1-124-438-00	ELECT	1MF	20%	50V
C715	1-102-816-00	CERAMIC	120PF	5%	50V
C716	1-130-468-00	MYLAR	560PF	5%	50V
C717	1-161-379-00	CERAMIC	0.01MF	30%	16V
C718	1-136-159-00	MYLAR	0.033MF	10%	50V
C719	1-130-477-00	MYLAR	0.0033MF	5%	50V
C720	1-124-442-00	ELECT	330MF	20%	6.3V
C721	1-136-153-00	MYLAR	0.01MF	10%	50V
C723	1-102-115-00	CERAMIC	560PF	10%	50V
C724	1-161-379-00	CERAMIC	0.01MF	30%	16V
C725	1-161-379-00	CERAMIC	0.01MF	30%	16V
C726	1-124-584-00	ELECT	100MF	20%	10V
C727	1-161-379-00	CERAMIC	0.01MF	30%	16V
C730	1-101-880-00	CERAMIC	47PF	5%	50V
C731	1-102-976-00	CERAMIC	180PF	5%	50V
C732	1-102-973-00	CERAMIC	100PF	5%	50V
C733	1-102-947-00	CERAMIC	10PF	0.5PF	50V
C734	1-161-379-00	CERAMIC	0.01MF	30%	16V
C735	1-161-379-00	CERAMIC	0.01MF	30%	16V
C736	1-131-368-00	TANTALUM	3.3MF	10%	16V
C737	1-124-589-11	ELECT	47MF	20%	10V
C738	1-123-875-11	ELECT	10MF	20%	50V
C739	1-162-851-11	CERAMIC	0.1MF	10%	16V
C740	1-162-851-11	CERAMIC	0.1MF	10%	16V
C741	1-162-851-11	CERAMIC	0.1MF	10%	16V
C742	1-124-584-00	ELECT	100MF	20%	10V
C743	1-161-379-00	CERAMIC	0.01MF	30%	16V
C744	1-161-379-00	CERAMIC	0.01MF	30%	16V
C745	1-124-589-11	ELECT	47MF	20%	10V
C746	1-161-379-00	CERAMIC	0.01MF	30%	16V
C747	1-102-971-00	CERAMIC	82PF	5%	50V
C748	1-102-953-00	CERAMIC	18PF	5%	50V
C749	1-161-379-00	CERAMIC	0.01MF	30%	16V
C750	1-161-379-00	CERAMIC	0.01MF	30%	16V
C751	1-124-589-11	ELECT	47MF	20%	10V
C752	1-161-379-00	CERAMIC	0.01MF	30%	16V
C753	1-124-589-11	ELECT	47MF	20%	10V
C754	1-161-379-00	CERAMIC	0.01MF	30%	16V
C755	1-161-379-00	CERAMIC	0.01MF	30%	16V
C756	1-124-589-11	ELECT	47MF	20%	10V
C757	1-161-379-00	CERAMIC	0.01MF	30%	16V
C758	1-161-379-00	CERAMIC	0.01MF	30%	16V
C759	1-161-379-00	CERAMIC	0.01MF	30%	16V
C760	1-124-589-11	ELECT	47MF	20%	10V
C761	1-161-379-00	CERAMIC	0.01MF	30%	16V
C762	1-102-106-00	CERAMIC	100PF	10%	50V
C763	1-102-978-00	CERAMIC	220PF	5%	50V
C764	1-102-978-00	CERAMIC	220PF	5%	50V
C765	1-102-973-00	CERAMIC	100PF	5%	50V
C766	1-161-379-00	CERAMIC	0.01MF	30%	16V
C767	1-161-051-00	CERAMIC	0.01MF	10%	25V
C768	1-124-589-11	ELECT	47MF	20%	16V
C769	1-161-379-00	CERAMIC	0.01MF	30%	16V
C770	1-161-379-00	CERAMIC	0.01MF	30%	16V
C772	1-161-379-00	CERAMIC	0.01MF	30%	16V
C781	1-102-971-00	CERAMIC	82PF	5%	50V
C782	1-102-953-00	CERAMIC	18PF	5%	50V
C783	1-162-851-11	CERAMIC	0.1MF	10%	16V
C801	1-126-101-11	ELECT	100MF	20%	16V
C802	1-124-584-00	ELECT	100MF	20%	10V
C803	1-124-589-11	ELECT	47MF	20%	16V

When indicating parts by reference number, please include the board name.

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Ref.No	Part No.	Description			Remark
C804	1-124-589-11	ELECT	47MF	20%	16V
C805	1-124-261-00	ELECT	10MF	20%	50V
C806	1-101-888-00	CERAMIC	68PF	5%	50V
C807	1-130-479-00	MYLAR	0.0047MF	10%	50V
C808	1-124-584-00	ELECT	100MF	20%	10V
C809	1-161-379-00	CERAMIC	0.01MF	30%	16V
C810	1-124-589-11	ELECT	47MF	20%	16V
C811	1-124-465-00	ELECT	0.47MF	20%	50V
C812	1-124-257-00	ELECT	2.2MF	20%	50V
C813	1-124-465-00	ELECT	0.47MF	20%	50V
C814	1-124-257-00	ELECT	2.2MF	20%	50V
C815	1-161-379-00	CERAMIC	0.01MF	30%	16V
C816	1-124-589-11	ELECT	47MF	20%	16V
C817	1-124-261-00	ELECT	10MF	20%	50V
C818	1-124-257-00	ELECT	2.2MF	20%	50V
C819	1-124-589-11	ELECT	47MF	20%	16V
C820	1-124-589-11	ELECT	47MF	20%	16V
C821	1-124-589-11	ELECT	47MF	20%	16V
C822	1-124-589-11	ELECT	47MF	20%	16V
C823	1-124-589-11	ELECT	47MF	20%	16V
C824	1-124-589-11	ELECT	47MF	20%	16V
C825	1-124-589-11	ELECT	47MF	20%	16V
C826	1-124-589-11	ELECT	47MF	20%	16V
C827	1-124-261-00	ELECT	10MF	20%	50V
C828	1-124-261-00	ELECT	10MF	20%	50V
C829	1-124-584-00	ELECT	100MF	20%	10V
C830	1-131-347-00	TANTALUM	1MF	10%	25V
C831	1-161-379-00	CERAMIC	0.01MF	30%	16V
C832	1-124-589-11	ELECT	47MF	20%	16V
C833	1-124-589-11	ELECT	47MF	20%	16V
C834	1-124-257-00	ELECT	2.2MF	20%	50V
C835	1-124-589-11	ELECT	47MF	20%	16V
C836	1-124-257-00	ELECT	2.2MF	20%	50V
C837	1-161-379-00	CERAMIC	0.01MF	30%	16V
C838	1-124-589-11	ELECT	47MF	20%	16V
C839	1-124-261-00	ELECT	10MF	20%	50V
C840	1-124-257-00	ELECT	2.2MF	20%	50V
C841	1-124-589-11	ELECT	47MF	20%	16V
C842	1-124-589-11	ELECT	47MF	20%	16V
C843	1-161-379-00	CERAMIC	0.01MF	30%	16V
C844	1-124-589-11	ELECT	47MF	20%	16V
C845	1-161-379-00	CERAMIC	0.01MF	30%	16V
C846	1-124-589-11	ELECT	47MF	20%	16V
C847	1-136-165-00	MYLAR	0.1MF	10%	50V
C848	1-161-379-00	CERAMIC	0.01MF	30%	16V
C849	1-136-169-00	MYLAR	0.22MF	10%	50V
C850	1-124-589-11	ELECT	47MF	20%	16V
C851	1-136-287-11	FILM	0.0047MF	10%	50V
C852	1-130-475-00	MYLAR	0.0022MF	10%	50V
C853	1-124-589-11	ELECT	47MF	20%	16V
C854	1-124-589-11	ELECT	47MF	20%	16V
C855	1-130-475-00	MYLAR	0.0022MF	10%	50V
C856	1-124-261-00	ELECT	10MF	20%	50V
C857	1-130-471-00	MYLAR	0.001MF	10%	50V
C858	1-124-261-00	ELECT	10MF	20%	50V
C859	1-124-261-00	ELECT	10MF	20%	50V
C860	1-124-438-00	ELECT	1MF	20%	50V
C861	1-124-261-00	ELECT	10MF	20%	50V
C862	1-136-155-00	MYLAR	0.015MF	10%	50V
C863	1-124-261-00	ELECT	10MF	20%	50V
C864	1-124-589-11	ELECT	47MF	20%	16V
C865	1-161-379-00	CERAMIC	0.01MF	30%	16V
C866	1-161-379-00	CERAMIC	0.01MF	30%	16V
C867	1-161-379-00	CERAMIC	0.01MF	30%	16V
C868	1-161-379-00	CERAMIC	0.01MF	30%	16V
C869	1-124-589-11	ELECT	47MF	20%	10V
C870	1-161-379-00	CERAMIC	0.01MF	30%	16V
C871	1-161-379-00	CERAMIC	0.01MF	30%	16V
C872	1-161-379-00	CERAMIC	0.01MF	30%	16V
C873	1-161-379-00	CERAMIC	0.01MF	30%	16V
C874	1-161-379-00	CERAMIC	0.01MF	30%	16V
C875	1-161-379-00	CERAMIC	0.01MF	30%	16V
C876	1-161-379-00	CERAMIC	0.01MF	30%	16V
C877	1-124-584-00	ELECT	100MF	20%	10V
C878	1-124-589-11	ELECT	47MF	20%	16V
C879	1-124-261-00	ELECT	10MF	20%	50V
C880	1-124-589-11	ELECT	47MF	20%	10V
C881	1-161-379-00	CERAMIC	0.01MF	30%	16V
C882	1-124-589-11	ELECT	47MF	20%	10V
C883	1-161-379-00	CERAMIC	0.01MF	30%	16V
C884	1-102-074-00	CERAMIC	0.001MF	10%	50V
C885	1-124-589-11	ELECT	47MF	20%	16V
C886	1-102-959-00	CERAMIC	22PF	5%	50V
C888	1-130-475-00	MYLAR	0.0022MF	10%	50V

CONNECTOR

CN102	1-506-469-11	PIN, CONNECTOR 4P
CN110	*1-560-892-00	PIN, CONNECTOR 4P
CN114	*1-506-474-11	PIN, CONNECTOR 9P
CN120	1-506-469-11	PIN, CONNECTOR 4P
CN121	1-506-471-11	PIN, CONNECTOR 6P
CN122	1-506-469-11	PIN, CONNECTOR 4P
CN130	1-506-473-11	PIN, CONNECTOR 8P
CN133	*1-506-467-11	PIN, CONNECTOR 2P
CN301	1-506-473-11	PIN, CONNECTOR 8P
CN302	*1-506-467-11	PIN, CONNECTOR 2P
CN303	1-506-470-11	PIN, CONNECTOR 5P
CN309	1-506-468-11	PIN, CONNECTOR 3P
CN310	*1-560-893-00	PIN, CONNECTOR 5P
CN312	1-506-472-11	PIN, CONNECTOR 7P
CN313	1-506-469-11	PIN, CONNECTOR 4P
CN315	1-506-467-11	PIN, CONNECTOR 2P

TRIMMER

CV701	1-141-245-00	TRIMMER, CERAMIC

When indicating parts by reference number, please include the board name.

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Ref.No	Part No.	Description	Remark
		DIODE	
D103	8-719-911-19	DIODE 1SS119	
D104	8-719-911-19	DIODE 1SS119	
D107	8-719-911-19	DIODE 1SS119	
D108	8-719-911-19	DIODE 1SS119	
D110	8-719-911-19	DIODE 1SS119	
D111	8-719-911-19	DIODE 1SS119	
D112	8-719-911-19	DIODE 1SS119	
D601	8-719-911-19	DIODE 1SS119	
D603	8-719-911-19	DIODE 1SS119	
D604	8-719-110-31	DIODE RD12E-B	
D605	8-719-911-19	DIODE 1SS119	
D606	8-719-911-19	DIODE 1SS119	
D607	8-719-911-19	DIODE 1SS119	
D701	8-719-911-19	DIODE 1SS119	
D801	8-719-911-19	DIODE 1SS119	
D802	8-719-911-19	DIODE 1SS119	
D803	8-719-911-19	DIODE 1SS119	
D804	8-719-911-19	DIODE 1SS119	
D805	8-719-911-19	DIODE 1SS119	
D806	8-719-911-19	DIODE 1SS119	
		DELAY LINE	
FL701	1-415-361-11	DELAY LINE	
		IC	
IC101	8-759-103-19	IC UPC319C	
IC102	8-759-103-19	IC UPC319C	
IC103	8-759-902-21	IC SN74LS221N	
IC104	8-759-314-41	IC HA11441	
IC105	8-759-901-23	IC SN74LS123N	
IC106	8-759-618-48	IC M51848L	
IC107	8-759-240-40	IC TC4040BP	
IC108	8-759-202-16	IC TC74HC11P	
IC109	8-759-202-14	IC TC74HC08P	
IC110	8-759-202-11	IC TC74HC00P	
IC111	8-759-902-21	IC SN74LS221N	
IC112	8-759-618-48	IC M51848L	
IC601	8-759-981-57	IC RC2043DD	
IC602	8-759-605-46	IC M51131L	
IC603	8-759-140-53	IC UPD4053BC	
IC604	8-759-981-57	IC RC2043DD	
IC605	8-759-605-46	IC M51131L	
IC606	8-759-981-57	IC RC2043DD	
IC608	8-759-605-46	IC M51131L	
IC609	8-759-605-46	IC M51131L	
IC701	8-759-202-12	IC TC74HC02P	
IC702	8-759-203-05	IC TC74HC193P	
IC703	8-759-603-53	IC M51271SP	
IC704	8-759-007-40	IC TL082CP	
IC705	8-752-030-77	IC V7040	
IC706	8-759-602-06	IC M5109P	
IC801	8-759-102-37	IC UPD4052BC	
IC802	8-759-102-37	IC UPD4052BC	
IC803	8-759-140-66	IC UPD4066BC	
IC804	8-759-203-83	IC TC74HC4538P	
IC805	8-759-203-83	IC TC74HC4538P	
IC806	8-759-140-53	IC UPD4053BC	
IC807	8-759-745-61	IC NJM4560D-D	
IC808	8-759-745-61	IC NJM4560D-D	
IC809	8-759-103-19	IC UPC319C	
IC810	8-759-103-19	IC UPC319C	
IC811	8-759-202-18	IC TC74HC20P	
IC812	8-759-140-66	IC UPD4066BC	
IC813	8-759-140-53	IC UPD4053BC	
IC814	8-759-001-42	IC MC74HC174N	
		COIL	
L101	1-408-413-00	INDUCTOR 22UH	
L102	1-410-482-31	INDUCTOR 100UH	
L201	1-408-413-00	INDUCTOR 22UH	
L702	1-408-419-00	INDUCTOR 68UH	
L704	1-410-473-11	INDUCTOR 18UH	
L705	1-408-420-00	INDUCTOR 82UH	
L706	1-410-473-11	INDUCTOR 18UH	
L707	1-408-420-00	INDUCTOR 82UH	
		TRANSISTOR	
Q101	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q102	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q103	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q104	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q105	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q106	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q107	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q108	8-729-173-38	TRANSISTOR 2SA733-K	
Q109	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q110	8-729-173-38	TRANSISTOR 2SA733-K	
Q111	8-729-173-38	TRANSISTOR 2SA733-K	
Q112	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q113	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q114	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q115	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q116	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q117	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q119	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q120	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q121	8-729-900-80	TRANSISTOR DTC114ES	
Q122	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q123	8-729-900-80	TRANSISTOR DTC114ES	
Q124	8-729-900-80	TRANSISTOR DTC114ES	
Q125	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q126	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q127	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q128	8-729-119-78	TRANSISTOR 2SC2785-HFE	

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark
Q129	8-729-900-61	TRANSISTOR DTA114ES	
Q130	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q601	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q602	8-729-173-38	TRANSISTOR 2SA733-K	
Q603	8-729-173-38	TRANSISTOR 2SA733-K	
Q604	8-729-173-38	TRANSISTOR 2SA733-K	
Q605	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q606	8-729-105-72	TRANSISTOR 2SK523-L1	
Q607	8-729-105-72	TRANSISTOR 2SK523-L1	
Q701	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q702	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q703	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q704	8-729-173-38	TRANSISTOR 2SA733-K	
Q705	8-729-173-38	TRANSISTOR 2SA733-K	
Q706	8-729-173-38	TRANSISTOR 2SA733-K	
Q707	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q708	8-729-173-38	TRANSISTOR 2SA733-K	
Q709	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q710	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q711	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q712	8-729-900-80	TRANSISTOR DTC114ES	
Q713	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q714	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q715	8-729-173-38	TRANSISTOR 2SA733-K	
Q716	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q718	8-729-900-80	TRANSISTOR DTC114ES	
Q719	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q720	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q801	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q802	8-729-173-38	TRANSISTOR 2SA733-K	
Q803	8-729-173-38	TRANSISTOR 2SA733-K	
Q804	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q805	8-729-173-38	TRANSISTOR 2SA733-K	
Q806	8-729-173-38	TRANSISTOR 2SA733-K	
Q807	8-729-900-80	TRANSISTOR DTC114ES	
Q808	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q809	8-729-173-38	TRANSISTOR 2SA733-K	
Q810	8-729-173-38	TRANSISTOR 2SA733-K	
Q811	8-729-900-80	TRANSISTOR DTC114ES	
Q812	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q813	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q814	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q815	8-729-173-38	TRANSISTOR 2SA733-K	
Q816	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q817	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q818	8-729-173-38	TRANSISTOR 2SA733-K	
Q819	8-729-900-80	TRANSISTOR DTC114ES	
Q820	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q821	8-729-173-38	TRANSISTOR 2SA733-K	
Q822	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q823	8-729-173-38	TRANSISTOR 2SA733-K	
Q824	8-729-173-38	TRANSISTOR 2SA733-K	
Q825	8-729-900-80	TRANSISTOR DTC114ES	

Ref.No	Part No.	Description				Remark
Q826	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q827	8-729-173-38	TRANSISTOR 2SA733-K				
Q828	8-729-173-38	TRANSISTOR 2SA733-K				
Q829	8-729-900-80	TRANSISTOR DTC114ES				
Q840	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q841	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q842	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q843	8-729-173-38	TRANSISTOR 2SA733-K				
Q844	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q845	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q846	8-729-173-38	TRANSISTOR 2SA733-K				
Q847	8-729-900-80	TRANSISTOR DTC114ES				
Q848	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q849	8-729-119-78	TRANSISTOR 2SC2785-HFE				
		RESISTOR				
R100	1-249-428-11	CARBON	8.2K	5%	1/4W	
R101	1-249-409-11	CARBON	220	5%	1/4W	
R102	1-249-421-11	CARBON	2.2K	5%	1/4W	
R103	1-249-416-11	CARBON	820	5%	1/4W	
R104	1-249-417-11	CARBON	1K	5%	1/4W	
R105	1-249-417-11	CARBON	1K	5%	1/4W	
R106	1-249-417-11	CARBON	1K	5%	1/4W	
R107	1-247-903-00	CARBON	1M	5%	1/4W	
R108	1-249-417-11	CARBON	1K	5%	1/4W	
R109	1-249-421-11	CARBON	2.2K	5%	1/4W	
R110	1-249-417-11	CARBON	1K	5%	1/4W	
R111	1-249-428-11	CARBON	8.2K	5%	1/4W	
R112	1-249-428-11	CARBON	8.2K	5%	1/4W	
R113	1-247-903-00	CARBON	1M	5%	1/4W	
R114	1-249-421-11	CARBON	2.2K	5%	1/4W	
R115	1-249-423-11	CARBON	3.3K	5%	1/4W	
R116	1-249-402-11	CARBON	56	5%	1/4W	
R117	1-249-419-11	CARBON	1.5K	5%	1/4W	
R118	1-249-422-11	CARBON	2.7K	5%	1/4W	
R119	1-249-424-11	CARBON	3.9K	5%	1/4W	
R120	1-249-429-11	CARBON	10K	5%	1/4W	
R121	1-249-409-11	CARBON	220	5%	1/4W	
R122	1-249-429-11	CARBON	10K	5%	1/4W	
R123	1-249-421-11	CARBON	2.2K	5%	1/4W	
R124	1-249-409-11	CARBON	220	5%	1/4W	
R125	1-247-887-00	CARBON	220K	5%	1/4W	
R126	1-249-421-11	CARBON	2.2K	5%	1/4W	
R127	1-249-427-11	CARBON	6.8K	5%	1/4W	
R128	1-249-421-11	CARBON	2.2K	5%	1/4W	
R129	1-249-427-11	CARBON	6.8K	5%	1/4W	
R130	1-249-421-11	CARBON	2.2K	5%	1/4W	
R131	1-249-421-11	CARBON	2.2K	5%	1/4W	
R132	1-249-423-11	CARBON	3.3K	5%	1/4W	
R133	1-249-421-11	CARBON	2.2K	5%	1/4W	
R134	1-249-421-11	CARBON	2.2K	5%	1/4W	
R135	1-249-434-11	CARBON	27K	5%	1/4W	
R136	1-249-429-11	CARBON	10K	5%	1/4W	

When indicating parts by reference number, please include the board name.

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Ref.No	Part No.	Description				Remark
R137	1-249-419-11	CARBON	1.5K	5%	1/4W	
R138	1-249-424-11	CARBON	3.9K	5%	1/4W	
R139	1-249-423-11	CARBON	3.3K	5%	1/4W	
R140	1-249-419-11	CARBON	1.5K	5%	1/4W	
R141	1-249-433-11	CARBON	22K	5%	1/4W	
R142	1-249-428-11	CARBON	8.2K	5%	1/4W	
R144	1-249-431-11	CARBON	15K	5%	1/4W	
R145	1-249-397-11	CARBON	22	5%	1/4W	
R146	1-249-425-11	CARBON	4.7K	5%	1/4W	
R147	1-249-434-11	CARBON	27K	5%	1/4W	
R148	1-249-431-11	CARBON	15K	5%	1/4W	
R149	1-249-429-11	CARBON	10K	5%	1/4W	
R150	1-249-429-11	CARBON	10K	5%	1/4W	
R151	1-249-419-11	CARBON	1.5K	5%	1/4W	
R153	1-249-419-11	CARBON	1.5K	5%	1/4W	
R155	1-249-418-11	CARBON	1.2K	5%	1/4W	
R156	1-249-427-11	CARBON	6.8K	5%	1/4W	
R157	1-249-427-11	CARBON	6.8K	5%	1/4W	
R158	1-249-429-11	CARBON	10K	5%	1/4W	
R159	1-249-425-11	CARBON	4.7K	5%	1/4W	
R162	1-249-438-11	CARBON	56K	5%	1/4W	
R163	1-249-421-11	CARBON	2.2K	5%	1/4W	
R165	1-249-413-11	CARBON	470	5%	1/4W	
R166	1-249-417-11	CARBON	1K	5%	1/4W	
R167	1-249-413-11	CARBON	470	5%	1/4W	
R168	1-249-417-11	CARBON	1K	5%	1/4W	
R169	1-249-413-11	CARBON	470	5%	1/4W	
R170	1-249-417-11	CARBON	1K	5%	1/4W	
R171	1-249-413-11	CARBON	470	5%	1/4W	
R172	1-249-417-11	CARBON	1K	5%	1/4W	
R173	1-249-413-11	CARBON	470	5%	1/4W	
R174	1-249-417-11	CARBON	1K	5%	1/4W	
R175	1-249-421-11	CARBON	2.2K	5%	1/4W	
R176	1-249-417-11	CARBON	1K	5%	1/4W	
R177	1-249-426-11	CARBON	5.6K	5%	1/4W	
R178	1-249-429-11	CARBON	10K	5%	1/4W	
R179	1-249-439-11	CARBON	68K	5%	1/4W	
R180	1-249-413-11	CARBON	470	5%	1/4W	
R181	1-249-409-11	CARBON	220	5%	1/4W	
R186	1-249-413-11	CARBON	470	5%	1/4W	
R187	1-249-421-11	CARBON	2.2K	5%	1/4W	
R188	1-249-429-11	CARBON	10K	5%	1/4W	
R189	1-249-418-11	CARBON	1.2K	5%	1/4W	
R191	1-249-418-11	CARBON	1.2K	5%	1/4W	
R193	1-249-413-11	CARBON	470	5%	1/4W	
R194	1-249-417-11	CARBON	1K	5%	1/4W	
R195	1-249-421-11	CARBON	2.2K	5%	1/4W	
R196	1-249-417-11	CARBON	1K	5%	1/4W	
R197	1-249-429-11	CARBON	10K	5%	1/4W	
R198	1-249-425-11	CARBON	4.7K	5%	1/4W	
R200	1-249-417-11	CARBON	1K	5%	1/4W	
R201	1-249-413-11	CARBON	470	5%	1/4W	
R202	1-249-437-11	CARBON	47K	5%	1/4W	

Ref.No	Part No.	Description				Remark
R203	1-249-421-11	CARBON	2.2K	5%	1/4W	
R205	1-249-421-11	CARBON	2.2K	5%	1/4W	
R206	1-249-429-11	CARBON	10K	5%	1/4W	
R207	1-249-417-11	CARBON	1K	5%	1/4W	
R601	1-249-427-11	CARBON	6.8K	5%	1/4W	
R602	1-249-431-11	CARBON	15K	5%	1/4W	
R605	1-249-431-11	CARBON	15K	5%	1/4W	
R606	1-249-409-11	CARBON	220	5%	1/4W	
R608	1-249-422-11	CARBON	2.7K	5%	1/4W	
R612	1-249-440-11	CARBON	82K	5%	1/4W	
R613	1-249-402-11	CARBON	56	5%	1/4W	
R614	1-249-423-11	CARBON	3.3K	5%	1/4W	
R615	1-247-881-00	CARBON	120K	5%	1/4W	
R617	1-249-402-11	CARBON	56	5%	1/4W	
R618	1-249-429-11	CARBON	10K	5%	1/4W	
R619	1-249-439-11	CARBON	68K	5%	1/4W	
R620	1-249-441-11	CARBON	100K	5%	1/4W	
R621	1-249-441-11	CARBON	100K	5%	1/4W	
R622	1-249-417-11	CARBON	1K	5%	1/4W	
R623	1-249-417-11	CARBON	1K	5%	1/4W	
R624	1-249-417-11	CARBON	1K	5%	1/4W	
R625	1-249-417-11	CARBON	1K	5%	1/4W	
R626	1-249-417-11	CARBON	1K	5%	1/4W	
R627	1-249-417-11	CARBON	1K	5%	1/4W	
R628	1-249-441-11	CARBON	100K	5%	1/4W	
R629	1-249-441-11	CARBON	100K	5%	1/4W	
R630	1-249-441-11	CARBON	100K	5%	1/4W	
R631	1-249-441-11	CARBON	100K	5%	1/4W	
R634	1-249-426-11	CARBON	5.6K	5%	1/4W	
R635	1-249-429-11	CARBON	10K	5%	1/4W	
R636	1-249-429-11	CARBON	10K	5%	1/4W	
R637	1-249-402-11	CARBON	56	5%	1/4W	
R638	1-249-402-11	CARBON	56	5%	1/4W	
R639	1-249-426-11	CARBON	5.6K	5%	1/4W	
R640	1-249-429-11	CARBON	10K	5%	1/4W	
R641	1-249-429-11	CARBON	10K	5%	1/4W	
R642	1-249-429-11	CARBON	10K	5%	1/4W	
R643	1-249-429-11	CARBON	10K	5%	1/4W	
R644	1-249-433-11	CARBON	22K	5%	1/4W	
R645	1-249-429-11	CARBON	10K	5%	1/4W	
R651	1-249-429-11	CARBON	10K	5%	1/4W	
R652	1-249-429-11	CARBON	10K	5%	1/4W	
R655	1-249-429-11	CARBON	10K	5%	1/4W	
R660	1-249-427-11	CARBON	6.8K	5%	1/4W	
R661	1-249-429-11	CARBON	10K	5%	1/4W	
R662	1-249-425-11	CARBON	4.7K	5%	1/4W	
R663	1-247-903-00	CARBON	1M	5%	1/4W	
R664	1-247-903-00	CARBON	1M	5%	1/4W	
R665	1-249-429-11	CARBON	10K	5%	1/4W	
R701	1-249-427-11	CARBON	6.8K	5%	1/4W	
R703	1-249-421-11	CARBON	2.2K	5%	1/4W	
R704	1-249-431-11	CARBON	15K	5%	1/4W	
R705	1-249-435-11	CARBON	33K	5%	1/4W	

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Ref.No	Part No.	Description				Remark
R706	1-249-431-11	CARBON	15K	5%	1/4W	
R707	1-249-431-11	CARBON	15K	5%	1/4W	
R708	1-247-895-00	CARBON	470K	5%	1/4W	
R709	1-249-436-11	CARBON	39K	5%	1/4W	
R710	1-249-421-11	CARBON	2.2K	5%	1/4W	
R711	1-249-413-11	CARBON	470	5%	1/4W	
R712	1-249-435-11	CARBON	33K	5%	1/4W	
R713	1-249-433-11	CARBON	22K	5%	1/4W	
R714	1-249-417-11	CARBON	1K	5%	1/4W	
R715	1-249-440-11	CARBON	82K	5%	1/4W	
R716	1-249-417-11	CARBON	1K	5%	1/4W	
R717	1-247-866-11	CARBON	30K	5%	1/4W	
R718	1-249-425-11	CARBON	4.7K	5%	1/4W	
R719	1-249-409-11	CARBON	220	5%	1/4W	
R720	1-249-403-11	CARBON	68	5%	1/4W	
R721	1-249-405-11	CARBON	100	5%	1/4W	
R722	1-249-425-11	CARBON	4.7K	5%	1/4W	
R723	1-249-419-11	CARBON	1.5K	5%	1/4W	
R724	1-249-413-11	CARBON	470	5%	1/4W	
R725	1-249-435-11	CARBON	33K	5%	1/4W	
R727	1-249-413-11	CARBON	470	5%	1/4W	
R728	1-249-413-11	CARBON	470	5%	1/4W	
R729	1-249-413-11	CARBON	470	5%	1/4W	
R730	1-249-417-11	CARBON	1K	5%	1/4W	
R731	1-249-413-11	CARBON	470	5%	1/4W	
R732	1-249-417-11	CARBON	1K	5%	1/4W	
R733	1-249-411-11	CARBON	330	5%	1/4W	
R734	1-249-419-11	CARBON	1.5K	5%	1/4W	
R735	1-249-421-11	CARBON	2.2K	5%	1/4W	
R736	1-249-413-11	CARBON	470	5%	1/4W	
R737	1-249-417-11	CARBON	1K	5%	1/4W	
R738	1-247-903-00	CARBON	1M	5%	1/4W	
R739	1-249-429-11	CARBON	10K	5%	1/4W	
R740	1-249-421-11	CARBON	2.2K	5%	1/4W	
R741	1-249-430-11	CARBON	12K	5%	1/4W	
R742	1-249-427-11	CARBON	6.8K	5%	1/4W	
R743	1-249-413-11	CARBON	470	5%	1/4W	
R744	1-249-429-11	CARBON	10K	5%	1/4W	
R745	1-249-430-11	CARBON	12K	5%	1/4W	
R746	1-249-409-11	CARBON	220	5%	1/4W	
R747	1-249-411-11	CARBON	330	5%	1/4W	
R748	1-249-420-11	CARBON	1.8K	5%	1/4W	
R749	1-249-411-11	CARBON	330	5%	1/4W	
R750	1-249-420-11	CARBON	1.8K	5%	1/4W	
R751	1-249-411-11	CARBON	330	5%	1/4W	
R752	1-249-420-11	CARBON	1.8K	5%	1/4W	
R753	1-249-421-11	CARBON	2.2K	5%	1/4W	
R754	1-249-413-11	CARBON	470	5%	1/4W	
R755	1-249-413-11	CARBON	470	5%	1/4W	
R756	1-249-413-11	CARBON	470	5%	1/4W	
R757	1-249-429-11	CARBON	10K	5%	1/4W	
R758	1-249-429-11	CARBON	10K	5%	1/4W	
R759	1-249-417-11	CARBON	1K	5%	1/4W	
R760	1-249-425-11	CARBON	4.7K	5%	1/4W	
R761	1-249-429-11	CARBON	10K	5%	1/4W	
R762	1-249-413-11	CARBON	470	5%	1/4W	
R763	1-249-417-11	CARBON	1K	5%	1/4W	
R764	1-249-417-11	CARBON	1K	5%	1/4W	
R765	1-249-413-11	CARBON	470	5%	1/4W	
R766	1-249-416-11	CARBON	820	5%	1/4W	
R767	1-249-421-11	CARBON	2.2K	5%	1/4W	
R769	1-249-409-11	CARBON	220	5%	1/4W	
R770	1-249-417-11	CARBON	1K	5%	1/4W	
R771	1-249-417-11	CARBON	1K	5%	1/4W	
R772	1-249-417-11	CARBON	1K	5%	1/4W	
R773	1-249-411-11	CARBON	330	5%	1/4W	
R774	1-249-417-11	CARBON	1K	5%	1/4W	
R775	1-249-416-11	CARBON	820	5%	1/4W	
R776	1-249-429-11	CARBON	10K	5%	1/4W	
R777	1-249-409-11	CARBON	220	5%	1/4W	
R778	1-249-430-11	CARBON	12K	5%	1/4W	
R779	1-249-417-11	CARBON	1K	5%	1/4W	
R780	1-249-413-11	CARBON	470	5%	1/4W	
R781	1-249-417-11	CARBON	1K	5%	1/4W	
R782	1-249-425-11	CARBON	4.7K	5%	1/4W	
R783	1-249-409-11	CARBON	220	5%	1/4W	
R785	1-249-417-11	CARBON	1K	5%	1/4W	
R787	1-249-429-11	CARBON	10K	5%	1/4W	
R789	1-249-419-11	CARBON	1.5K	5%	1/4W	
R790	1-249-429-11	CARBON	10K	5%	1/4W	
R792	1-249-413-11	CARBON	470	5%	1/4W	
R794	1-249-429-11	CARBON	10K	5%	1/4W	
R801	1-249-409-11	CARBON	220	5%	1/4W	
R802	1-249-433-11	CARBON	22K	5%	1/4W	
R803	1-249-409-11	CARBON	220	5%	1/4W	
R804	1-249-433-11	CARBON	22K	5%	1/4W	
R805	1-249-422-11	CARBON	2.7K	5%	1/4W	
R806	1-249-429-11	CARBON	10K	5%	1/4W	
R807	1-249-437-11	CARBON	47K	5%	1/4W	
R808	1-249-413-11	CARBON	470	5%	1/4W	
R809	1-249-431-11	CARBON	15K	5%	1/4W	
R810	1-249-413-11	CARBON	470	5%	1/4W	
R811	1-249-413-11	CARBON	470	5%	1/4W	
R812	1-249-417-11	CARBON	1K	5%	1/4W	
R813	1-249-413-11	CARBON	470	5%	1/4W	
R815	1-249-425-11	CARBON	4.7K	5%	1/4W	
R816	1-215-437-00	METAL	4.7K	1%	1/6W	
R817	1-215-469-00	METAL	100K	1%	1/6W	
R818	1-215-437-00	METAL	4.7K	1%	1/6W	
R819	1-249-421-11	CARBON	2.2K	5%	1/4W	
R820	1-249-425-11	CARBON	4.7K	5%	1/4W	
R821	1-249-413-11	CARBON	470	5%	1/4W	
R823	1-249-413-11	CARBON	470	5%	1/4W	
R824	1-249-425-11	CARBON	4.7K	5%	1/4W	
R825	1-249-425-11	CARBON	4.7K	5%	1/4W	
R826	1-215-445-00	METAL	10K	1%	1/6W	

When indicating parts by reference number, please include the board name.

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Ref.No	Part No.	Description				Remark
R827	1-215-445-00	METAL	10K	1%	1/6W	
R828	1-249-425-11	CARBON	4.7K	5%	1/4W	
R829	1-249-413-11	CARBON	470	5%	1/4W	
R830	1-249-413-11	CARBON	470	5%	1/4W	
R831	1-249-425-11	CARBON	4.7K	5%	1/4W	
R832	1-249-425-11	CARBON	4.7K	5%	1/4W	
R833	1-215-445-00	METAL	10K	1%	1/6W	
R834	1-215-445-00	METAL	10K	1%	1/6W	
R835	1-249-425-11	CARBON	4.7K	5%	1/4W	
R836	1-249-413-11	CARBON	470	5%	1/4W	
R837	1-249-425-11	CARBON	4.7K	5%	1/4W	
R838	1-249-405-11	CARBON	100	5%	1/4W	
R839	1-249-405-11	CARBON	100	5%	1/4W	
R840	1-249-419-11	CARBON	1.5K	5%	1/4W	
R841	1-249-423-11	CARBON	3.3K	5%	1/4W	
R842	1-249-405-11	CARBON	100	5%	1/4W	
R843	1-249-405-11	CARBON	100	5%	1/4W	
R845	1-249-424-11	CARBON	3.9K	5%	1/4W	
R846	1-249-422-11	CARBON	2.7K	5%	1/4W	
R847	1-249-429-11	CARBON	10K	5%	1/4W	
R848	1-249-426-11	CARBON	5.6K	5%	1/4W	
R849	1-249-435-11	CARBON	33K	5%	1/4W	
R850	1-249-413-11	CARBON	470	5%	1/4W	
R851	1-249-417-11	CARBON	1K	5%	1/4W	
R852	1-249-413-11	CARBON	470	5%	1/4W	
R854	1-215-437-00	METAL	4.7K	1%	1/6W	
R855	1-215-469-00	METAL	100K	1%	1/6W	
R856	1-249-425-11	CARBON	4.7K	5%	1/4W	
R857	1-215-437-00	METAL	4.7K	1%	1/6W	
R858	1-249-421-11	CARBON	2.2K	5%	1/4W	
R859	1-249-425-11	CARBON	4.7K	5%	1/4W	
R860	1-249-413-11	CARBON	470	5%	1/4W	
R861	1-249-413-11	CARBON	470	5%	1/4W	
R862	1-249-425-11	CARBON	4.7K	5%	1/4W	
R863	1-249-425-11	CARBON	4.7K	5%	1/4W	
R864	1-215-445-00	METAL	10K	1%	1/6W	
R865	1-215-445-00	METAL	10K	1%	1/6W	
R866	1-249-425-11	CARBON	4.7K	5%	1/4W	
R867	1-249-413-11	CARBON	470	5%	1/4W	
R868	1-249-413-11	CARBON	470	5%	1/4W	
R869	1-249-425-11	CARBON	4.7K	5%	1/4W	
R870	1-249-425-11	CARBON	4.7K	5%	1/4W	
R871	1-215-445-00	METAL	10K	1%	1/6W	
R872	1-215-445-00	METAL	10K	1%	1/6W	
R873	1-249-425-11	CARBON	4.7K	5%	1/4W	
R874	1-249-413-11	CARBON	470	5%	1/4W	
R875	1-249-425-11	CARBON	4.7K	5%	1/4W	
R876	1-249-423-11	CARBON	3.3K	5%	1/4W	
R877	1-249-420-11	CARBON	1.8K	5%	1/4W	
R878	1-249-421-11	CARBON	2.2K	5%	1/4W	
R879	1-249-424-11	CARBON	3.9K	5%	1/4W	
R880	1-249-431-11	CARBON	15K	5%	1/4W	
R881	1-249-421-11	CARBON	2.2K	5%	1/4W	
R882	1-249-427-11	CARBON	6.8K	5%	1/4W	
R883	1-249-429-11	CARBON	10K	5%	1/4W	
R884	1-249-417-11	CARBON	1K	5%	1/4W	
R885	1-249-424-11	CARBON	3.9K	5%	1/4W	
R886	1-249-417-11	CARBON	1K	5%	1/4W	
R887	1-249-413-11	CARBON	470	5%	1/4W	
R888	1-215-441-00	METAL	6.8K	1%	1/6W	
R889	1-215-438-00	METAL	5.1K	1%	1/6W	
R890	1-215-447-00	METAL	12K	1%	1/6W	
R891	1-215-449-00	METAL	15K	1%	1/6W	
R892	1-215-429-00	METAL	2.2K	1%	1/6W	
R893	1-249-426-11	CARBON	5.6K	5%	1/4W	
R894	1-215-445-00	METAL	10K	1%	1/6W	
R895	1-215-442-00	METAL	7.5K	1%	1/6W	
R896	1-215-437-00	METAL	4.7K	1%	1/6W	
R897	1-215-447-00	METAL	12K	1%	1/6W	
R898	1-215-463-00	METAL	56K	1%	1/6W	
R899	1-215-436-00	METAL	4.3K	1%	1/6W	
R900	1-249-426-11	CARBON	5.6K	5%	1/4W	
R901	1-215-445-00	METAL	10K	1%	1/6W	
R902	1-249-441-11	CARBON	100K	5%	1/4W	
R903	1-249-441-11	CARBON	100K	5%	1/4W	
R904	1-249-441-11	CARBON	100K	5%	1/4W	
R905	1-249-441-11	CARBON	100K	5%	1/4W	
R906	1-249-429-11	CARBON	10K	5%	1/4W	
R907	1-249-429-11	CARBON	10K	5%	1/4W	
R908	1-249-429-11	CARBON	10K	5%	1/4W	
R909	1-249-429-11	CARBON	10K	5%	1/4W	
R910	1-249-429-11	CARBON	10K	5%	1/4W	
R911	1-249-429-11	CARBON	10K	5%	1/4W	
R912	1-249-429-11	CARBON	10K	5%	1/4W	
R913	1-249-429-11	CARBON	10K	5%	1/4W	
R914	1-249-433-11	CARBON	22K	5%	1/4W	
R916	1-249-417-11	CARBON	1K	5%	1/4W	
R917	1-249-441-11	CARBON	100K	5%	1/4W	
R918	1-249-437-11	CARBON	47K	5%	1/4W	
R919	1-249-412-11	CARBON	390	5%	1/4W	
R921	1-249-425-11	CARBON	4.7K	5%	1/4W	
R922	1-249-429-11	CARBON	10K	5%	1/4W	
R923	1-249-425-11	CARBON	4.7K	5%	1/4W	
R927	1-249-425-11	CARBON	4.7K	5%	1/4W	
R928	1-249-425-11	CARBON	4.7K	5%	1/4W	
R929	1-249-422-11	CARBON	2.7K	5%	1/4W	

VARIABLE RESISTOR

RV101	1-228-991-00	RES, ADJ, METAL GLAZE 2.2K
RV102	1-228-994-00	RES, ADJ, CARBON 10K
RV103	1-228-991-00	RES, ADJ, CARBON 2.2K
RV104	1-228-996-00	RES, ADJ, CARBON 47K
RV201	1-228-991-00	RES, ADJ, CARBON 2.2K
RV601	1-228-995-00	RES, ADJ, CARBON 22K
RV602	1-228-995-00	RES, ADJ, CARBON 22K
RV702	1-228-996-00	RES, ADJ, CARBON 47K

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark
RV704	1-228-991-00	RES, ADJ, CARBON 2.2K	
RV705	1-228-991-00	RES, ADJ, CARBON 2.2K	
RV706	1-228-991-00	RES, ADJ, CARBON 2.2K	
RV707	1-228-990-00	RES, ADJ, CARBON 1K	
RV801	1-228-990-00	RES, ADJ, CARBON 1K	
RV802	1-228-989-00	RES, ADJ, CARBON 470	
RV803	1-228-989-00	RES, ADJ, CARBON 470	
RV804	1-228-990-00	RES, ADJ, CARBON 1K	
RV805	1-228-989-00	RES, ADJ, CARBON 470	
RV806	1-228-990-00	RES, ADJ, CARBON 1K	
RV807	1-228-995-00	RES, ADJ, CARBON 22K	
RV808	1-228-991-00	RES, ADJ, CARBON 2.2K	
RV809	1-228-989-00	RES, ADJ, CARBON 470	
RV810	1-228-990-00	RES, ADJ, CARBON 1K	

CRYSTAL

X701	1-567-733-11	VIBRATOR, CRYSTAL

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*A-7061-751-A PW-61 BOARD, COMPLETE (UK/AUS MODEL)
****

*A-7061-835-A PW-61 BOARD, COMPLETE (AEP MODEL)
****

*1-533-189-11	HOLDER, FUSE
4-870-539-00	PLATE, GROUND

CAPACITOR

C400	1-126-176-11	ELECT	220MF	20%	10V
C401	⚠.1-136-472-11	FILM	0.1MF	20%	250V
C402	1-124-636-00	ELECT	3300MF	20%	25V
C404	1-161-051-00	CERAMIC	0.01MF	10%	25V
C405	1-161-051-00	CERAMIC	0.01MF	10%	25V
C406	1-161-051-00	CERAMIC	0.01MF	10%	25V
C407	1-161-051-00	CERAMIC	0.01MF	10%	25V
C408	1-124-898-11	ELECT	4700MF	20%	16V
C409	1-123-875-11	ELECT	10MF	20%	50V
C410	1-124-898-11	ELECT	4700MF	20%	16V
C412	1-124-887-00	ELECT	3300MF	20%	16V
C413	1-124-887-00	ELECT	3300MF	20%	16V
C414	1-123-875-11	ELECT	10MF	20%	50V
C415	1-123-875-11	ELECT	10MF	20%	50V
C416	1-126-176-11	ELECT	220MF	20%	10V
C417	1-161-379-00	CERAMIC	0.01MF	30%	16V
C418	1-126-176-11	ELECT	220MF	20%	10V
C419	1-161-379-00	CERAMIC	0.01MF	30%	16V
C424	1-126-176-11	ELECT	220MF	20%	10V
C426	1-124-120-11	ELECT	220MF	20%	16V
C662	1-123-875-11	ELECT	10MF	20%	50V

CONNECTOR

Ref.No	Part No.	Description	Remark
CN401	*1-564-321-00	PIN, CONNECTOR 2P	
CN402	*1-564-687-11	PIN, CONNECTOR 3P	
CN403	*1-560-896-00	PIN, CONNECTOR 8P	
CN404	*1-560-894-00	PIN, CONNECTOR 6P	
CN405	*1-560-891-00	PIN, CONNECTOR 3P	

DIODE

D401	⚠.8-719-200-82	DIODE 11ES2
D402	⚠.8-719-200-82	DIODE 11ES2
D403	⚠.8-719-500-36	DIODE D2SB20
D404	⚠.8-719-510-06	DIODE S1WB60
D602	8-719-911-19	DIODE 1SS119

FUSE

F401	⚠.1-532-259-00	FUSE T1.6A 250V

IC

IC401	8-759-982-32	IC RC78M06FA
IC402	8-759-701-66	IC NJM79M06FA

IC LINK

PS401	⚠.1-532-637-00	LINK, IC (ICP-N25) 1.0A
PS402	⚠.1-532-605-00	LINK, IC (ICP-N10) 0.4A
PS403	⚠.1-532-605-00	LINK, IC (ICP-N10) 0.4A
PS405	⚠.1-532-844-21	LINK, IC (PRF3150) 3.15A

RESISTOR

R401	⚠.1-249-470-11	CARBON	0.47	5%	1/2W	F
R402	⚠.1-249-470-11	CARBON	0.47	5%	1/2W	F
R407	1-249-409-11	CARBON	220	5%	1/4W	
R663	1-247-887-00	CARBON	220K	5%	1/4W	

TERMINAL PIN

TP401	1-535-443-00	PIN, TERMINAL (AC CORD)
TP402	1-535-443-00	PIN, TERMINAL (AC CORD)

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*1-630-229-21 FT-38 BOARD
****

*3-662-262-00 HOLDER (D), LED

DIODE

D103	8-719-940-82	DIODE SLR-34MC3
D104	8-719-300-71	DIODE SEL2210R (CHROMA NR)
D118	8-719-300-71	DIODE SEL2210R (VIDEO ART REVERSE)
D122	8-719-812-32	DIODE TLY123 (REVERSE NEGA/POSI)
D138	8-719-940-82	DIODE SLR-34MC3 (SPLIT SCREEN)

RESISTOR

R103	1-249-413-11	CARBON	470	5%	1/4W
R104	1-249-421-11	CARBON	2.2K	5%	1/4W
R105	1-249-413-11	CARBON	470	5%	1/4W
R106	1-249-437-11	CARBON	47K	5%	1/4W
R107	1-249-413-11	CARBON	470	5%	1/4W

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark
R113	1-249-413-11	CARBON 470 5% 1/4W	
R114	1-249-413-11	CARBON 470 5% 1/4W	
R115	1-249-421-11	CARBON 2.2K 5% 1/4W	
R122	1-249-437-11	CARBON 47K 5% 1/4W	
R123	1-249-413-11	CARBON 470 5% 1/4W	
R126	1-249-437-11	CARBON 47K 5% 1/4W	

VARIABLE RESISTOR

RV104	1-237-400-11	RES, VAR, CARBON 10K (VIDEO ART)	

SWITCH

S102	1-570-797-11	SWITCH, PUSH (1 KEY) (BYPASS)	
S103	1-570-797-11	SWITCH, PUSH (1 KEY) (CHROMA NR)	
S109	1-570-797-11	SWITCH, PUSH (1 KEY) (VIDEO ART REVERSE)	
S113	1-570-797-11	SWITCH, PUSH (1 KEY) (REVERSE NEGA/POSI)	
S128	1-570-797-11	SWITCH, PUSH (1 KEY) (SPLIT SCREEN)	

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*A-7070-842-A JK-44 BOARD, COMPLETE
****

*2-128-425-01 BRACKET, S TERMINAL

CAPACITOR

C001	1-123-875-11	ELECT 10MF 20% 50V	
C002	1-123-875-11	ELECT 10MF 20% 50V	
C003	1-123-875-11	ELECT 10MF 20% 50V	
C004	1-123-875-11	ELECT 10MF 20% 50V	
C005	1-123-875-11	ELECT 10MF 20% 50V	
C006	1-123-875-11	ELECT 10MF 20% 50V	
C007	1-123-875-11	ELECT 10MF 20% 50V	

CONNECTOR

CN051	1-506-481-11	PIN, CONNECTOR 2P	
CN052	1-506-487-11	PIN, CONNECTOR 8P	
CN053	1-506-482-11	PIN, CONNECTOR 3P	

JACK

CNJ001	1-568-304-11	JACK, PIN 2P (LINE IN)	
CNJ002	1-565-727-31	JACK, PIN 3P (SOURCE IN 1 CH)	
CNJ003	1-565-727-31	JACK, PIN 3P (SOURCE IN 2 CH)	
CNJ004	1-566-728-21	TERMINAL, S (SOURCE IN S VIDEO 1 CH)	
CNJ005	1-566-728-21	TERMINAL, S (SOURCE IN S VIDEO 2 CH)	
CNJ006	1-565-727-31	JACK, PIN 3P (OUTPUT 1 CH)	
CNJ007	1-565-727-31	JACK, PIN 3P (OUTPUT 2 CH)	
CNJ008	1-566-728-21	TERMINAL, S (OUTPUT S VIDEO 1 CH)	
CNJ009	1-566-728-21	TERMINAL, S (OUTPUT S VIDEO 2 CH)	

DIODE

.f.No	Part No.	Description	Remark
D001	8-719-911-19	DIODE 1SS119	
D002	8-719-911-19	DIODE 1SS119	
D003	8-719-911-19	DIODE 1SS119	
D016	8-719-108-12	DIODE RD9.1EW	
D017	8-719-108-12	DIODE RD9.1EW	
D018	8-719-108-12	DIODE RD9.1EW	
D019	8-719-108-12	DIODE RD9.1EW	
D020	8-719-108-12	DIODE RD9.1EW	
D021	8-719-108-12	DIODE RD9.1EW	
D024	8-719-108-12	DIODE RD9.1EW	
D025	8-719-108-12	DIODE RD9.1EW	
D026	8-719-108-12	DIODE RD9.1EW	
D027	8-719-108-12	DIODE RD9.1EW	
D801	8-719-108-12	DIODE RD9.1EW	
D802	8-719-108-12	DIODE RD9.1EW	
D803	8-719-108-12	DIODE RD9.1EW	
D804	8-719-108-12	DIODE RD9.1EW	

TRANSISTOR

Q001	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q002	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q003	8-729-119-78	TRANSISTOR 2SC2785-HFE	

RESISTOR

R001	1-249-429-11	CARBON 10K 5% 1/4W	
R002	1-249-429-11	CARBON 10K 5% 1/4W	
R003	1-249-429-11	CARBON 10K 5% 1/4W	
R004	1-249-429-11	CARBON 10K 5% 1/4W	
R005	1-249-429-11	CARBON 10K 5% 1/4W	
R006	1-249-429-11	CARBON 10K 5% 1/4W	
R010	1-247-804-11	CARBON 75 5% 1/4W	
R011	1-247-804-11	CARBON 75 5% 1/4W	
R012	1-247-804-11	CARBON 75 5% 1/4W	
R013	1-247-804-11	CARBON 75 5% 1/4W	
R014	1-247-804-11	CARBON 75 5% 1/4W	
R015	1-247-804-11	CARBON 75 5% 1/4W	
R016	1-249-441-11	CARBON 100K 5% 1/4W	
R017	1-249-441-11	CARBON 100K 5% 1/4W	
R018	1-249-441-11	CARBON 100K 5% 1/4W	
R019	1-249-441-11	CARBON 100K 5% 1/4W	
R020	1-249-441-11	CARBON 100K 5% 1/4W	
R021	1-249-441-11	CARBON 100K 5% 1/4W	
R022	1-247-804-11	CARBON 75 5% 1/4W	
R023	1-247-804-11	CARBON 75 5% 1/4W	

RELAY

RY001	1-515-529-11	RELAY	
RY002	1-515-529-11	RELAY	
RY003	1-515-529-11	RELAY	

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*1-630-220-12 MJ-22 BOARD
****

DIODE

D131	8-719-108-12	DIODE RD9.1EW	

When indicating parts by reference number, please include the board name.

JACK

Ref.No	Part No.	Description	Remark
J101	1-507-834-31	JACK (MIC)	

* * *

***1-630-222-12 PT-68 BOARD**

CAPACITOR

Ref.No	Part No.	Description				Remark
C403	1-123-875-11	ELECT	10MF	20%	50V	
C420	1-124-477-11	ELECT	47MF	20%	25V	
C421	1-161-379-00	CERAMIC	0.01MF	30%	16V	
C427	1-124-477-11	ELECT	47MF	20%	16V	

IC

Ref.No	Part No.	Description	Remark
IC403	8-759-701-59	IC NJM78M09FA	
IC404	8-759-914-44	IC TL431CLPB	
IC405	8-759-604-29	IC M5F7805	

RESISTOR

Ref.No	Part No.	Description				Remark
R403	1-249-434-11	CARBON	27K	5%	1/4W	
R404	1-249-426-11	CARBON	5.6K	5%	1/4W	

VARIABLE RESISTOR

Ref.No	Part No.	Description	Remark
RV401	1-228-990-00	RES, ADJ, CARBON 1K	

* * *

***1-630-228-21 AM-13 BOARD**

Ref.No	Part No.	Description	Remark
	2-118-268-01	NUT (M9), HEXAGON	

VARIABLE RESISTOR

Ref.No	Part No.	Description	Remark
RV101	1-238-519-21	RES, VAR, CARBON 1K/1K (PHASE CORRECT)	
RV102	1-237-425-11	RES, VAR, CARBON 10K/10K (GAMMA)	
RV103	1-237-399-11	RES, VAR, CARBON 1K (COLOR)	
RV108	1-237-425-21	RES, VAR, CARBON 10K/10K (AUDIO MIX)	
RV113	1-237-400-11	RES, VAR, CARBON 10K (MIC LEVEL)	

* * *

***1-630-227-21 AC-44 BOARD**

SWITCH

Ref.No	Part No.	Description	Remark
S401	⚠.1-553-318-13	SWITCH, PUSH (AC POWER) (1 KEY) (POWER)	

* * *

MISCELLANEOUS

Ref.No	Part No.	Description	Remark
	⚠.1-534-817-31	CORD, POWER (AEP MODEL)	
	⚠.1-551-732-11	CORD, POWER (AUS MODEL)	
	⚠.1-551-884-32	CORD, POWER (UK MODEL)	
	⚠.3-703-244-02	BUSHING (2104), CORD	
PT401	⚠.1-449-826-11	TRANSFORMER, POWER	

* * *

ACCESSORIES AND PACKING MATERIALS

Part No.	Description	Remark
*2-128-443-01	CUSHION (UPPER)	
*2-128-444-01	CUSHION (LOWER)	
*2-182-811-01	INDIVIDUAL CARTON	
3-786-993-11	MANUAL, INSTRUCTION (ENGLISH/FRENCH/ GERMAN/SPANISH/DUTCH)	
3-786-993-41	MANUAL, INSTRUCTION (AEP MODEL) (SWEDISH/ITALIAN/PORTUGUESE/ARABIC)	
3-786-994-11	REFERENCE, COLOR	

* * *

HARDWARE LIST

SCREW

Part No.	Description
7-682-661-09	SCREW +PSW 4X8
7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3

* * *

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

SECTION 7
ELECTRICAL ADJUSTMENT

During the adjustment, see the parts location diagram relevant to the adjustment on Page 130.

This section discusses the matters and instructions required for all the adjustments of the electric circuits of this equipment.

[Instruments Used]

1) Monitor TV
2) Oscilloscope (mono-or dual trace), bandwidth of 15 MHz or more, with delay mode
3) Frequency counter (6 digits or more)
4) PAL pattern generator
5) Digital voltmeter
6) Audio level meter
7) Vectorscope
8) Audio generator
9) Audio attenuator

[Preparation]

Perform adjustment under the following conditions unless otherwise specified.

- INPUT SELECT switch .... 1CH VIDEO
- BYPASS switch .... OFF
- SPLIT SCREEN switch .... OFF
- VIDEO ART REVERSE switch .... OFF
- VIDEO ART knob .... MAX (fully clockwise)
- CHROMA NR switch .... OFF
- REVERSE (NEGA/POSI) switch .... OFF
- GAMMA knob .... Center click position
- PHASE CORRECT knob .... Center click position
- COLOR knob .... Center click position
- BLACK BALANCE
  - ON/OFF switch .... OFF
  - WIDE RANGE switch .... OFF
  - BLACK CLIP switch .... OFF
  - BLACK CLIP knob .... MIN (fully counterclockwise)
- WHITE BALANCE
  - ON/OFF switch .... OFF
  - WIDE RANGE switch .... OFF
  - WHITE CLIP switch .... OFF
  - WHITE CLIP knob .... MIN (fully counterclockwise)
- WIPE PATTERN
  - ◧ switch .... OFF
  - ◨ switch .... OFF
  - ⬒ switch .... OFF
  - ⬓ switch .... OFF
  - ◙ switch .... OFF
  - ◈ switch .... OFF
- WIPE lever .... MIN (fully downward)
- FADER COLOR SELECT switch .... COLOR BAR
- FADER lever .... MIN (fully downward)
- AUTO SPEED
  - WIPE switch .... OFF
  - FADER switch .... OFF
  - SPEED knob .... FAST (fully clockwise)
  - START switch .... OFF
- FADER
  - VIDEO switch .... OFF
  - AUDIO switch .... OFF
  - WHITE switch .... OFF
  - BLACK switch .... OFF
  - BACK COLOR switch .... ON
- MIC level knob .... MIN
- AUDIO MIX knob .... SOURCE

[Connection]

Connect the instruments as shown below.

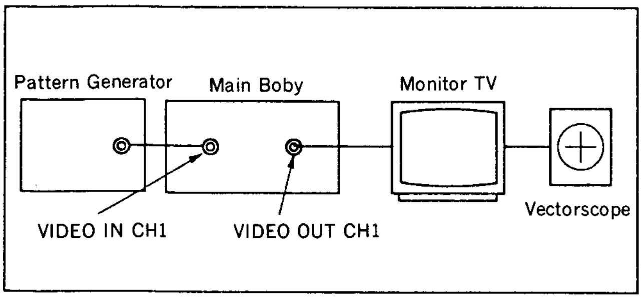

Pattern Generator
Main Boby
Monitor TV
Vectorscope
VIDEO IN CH1
VIDEO OUT CH1

Fig. 7-1.

[Color Bar Signal]

For this adjustment, use a color bar signal obtained from video output of the PAL pattern generator.

Connect the oscilloscope to the JK-44 board CN052 pin ① and check a video input signal for the following:

(1) The amplitude of a horizontal sync. signal must be 300±15mVp-p.

(2) The amplitude of a video signal must be 700±20 mVp-p.

(3) The amplitude of a burst signal must be 300±15 mVp-p.

(4) The amplitude of "cyan" or "red" must be 664±20m Vp-p.

Fig. 7-2. shows the video (color bar) signal used for adjustment.

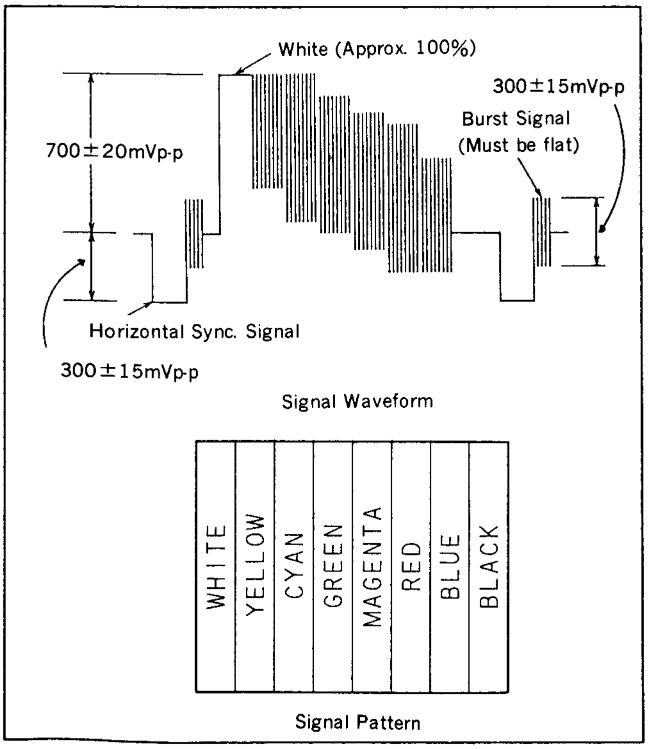

White (Approx. 100%)
300±15mVp-p
Burst Signal
(Must be flat)
700±20mVp-p
Horizontal Sync. Signal
300±15mVp-p
Signal Waveform
WHITE
YELLOW
CYAN
GREEN
MAGENTA
RED
BLUE
BLACK
Signal Pattern

Fig. 7-2 Color Bar Signal of Pattern Generator

[Input/Output Level Impedance]

S-Video input/output	S-VIDEO SOURCE IN (4-pin mini DIN) S-VIDEO OUTPUT (4-pin mini DIN) Y-signal : 1Vp-p, 75 ohms, unbalanced, sync negative C-signal : 0.3Vp-p, 75 ohms, unbalanced
Video input/output	V SOURCE IN 1 and 2 (phono jacks) V OUTPUT (phono jacks) 1Vp-p, 75 ohms, unbalanced, sync negative
Audio input	R/L SOURCE 1 and 2 (phono jacks) LINE IN (phono jacks) Input level : −7.5 dBs (0dBs=0.775Vrms) Input impedance : More than 47 kilohms MIC (minijack) Input level : −66 dBs Input impedance : More than 3 kilohms
Audio output	R/L OUTPUT (phono jacks) Output level : −7.5 dBs at 47 kilohms load Output impedance : Less than 10 kilohms

[Adjustment Sequence]

As a rule, adjust in the following sequence.

Adjustment of the power supply block

↓

Adjustment of the internal sync. signal and timing generator

↓

Adjustment of the composite video signal system

↓

Adjustment of the Y main signal system, negative/positive inverter and Y-γ circuit

↓

Adjustment of the chroma main signal system and burst signal system

↓

Adjustment of the fader/wipe back color system

↓

Adjustment of the color correct system

↓

Adjustment of the wipe system

↓

Adjustment of the video art and split screen system

↓

Adjustment of the audio system

7-1. ADJUSTMENT OF POWER SUPPLY BLOCK

7-1-1. −5V, +9V Adjustment

Measurement equipment	Digital voltmeter
−5V adjustment	
Measurement point	PW-61 board TP406 (W115 pin ④)
Adjustment element	PT-70 board RV402
Specified value	−5.00±0.01Vdc
+9V adjustment	
Measurement point	PW-61 board TP403 (W115 pin ①)
Adjustment element	PT-68 board RV401
Specified value	+9.00±0.02Vdc

[Adjustment Method]

1) Adjust each supply voltage to the specified value with each adjustment point.

7-1-2. +5V, +6V and −6V Confirmation (PW-61 Board)

Measurement equipment	Digital voltmeter
+5V check	
Measurement point	TP405 (W115 pin ②)
Specified value	5.0±0.2Vdc
+6V check	
Measurement point	TP407 (W310 pin ②)
Specified value	6.0±0.2Vdc
−6V check	
Measurement point	TP408 (W310 pin ④)
Specified value	−6.0±0.2Vdc

[Confirmation]

1) Confirm that each supply voltage meets the specified value.

7-2. ADJUSTMENT OF INTERNAL SYNC. SIGNAL AND TIMING GENERATOR

7-2-1. INT SYNC fsc Adjustment (YS-6 Board)

Signal	No signal
Measurement point	A : IC203 pin ⑦ B : Q223 Emitter
Measurement equipment	A : Frequency counter B : Digtal voltmeter
Adjustment element	CV205 CV247
Specified value	A : 4433618.75±30.00Hz B : 2.0±0.5Vdc

[Connection]

1) Remove the pattern generator.

[Adjustment Method]

1) Adjust the voltage of Q223 emitter to 3.5±0.5V with CV205.
2) Confirm that the frequency of IC203 pin ⑦ is over 4433618Hz.
   (In case of over 4433618Hz, move to procedure 5)).
3) Adjust the voltage of Q223 emitter to 0.5±0.5Vdc with CV247.
4) Repeat from 1) to 3).
5) Adjust the frequency of IC203 pin ⑦ to 4433618±20Hz with CV205.
6) Adjust the voltage of Q223 emitter to 2.0±0.5Vdc with CV247.
7) Repeat 5) and 6).

7-2-2. INT SYNC Burst Level Confirmation (YS-6 Board)

Signal	No signal
Measurement point	Q205 emitter (TP015)
Measurement equipment	Oscilloscope
Specified value	350±50mVp-p

[Connection]

1) Remove the pattern generator.

[Confirmation]

1) Confirm that a burst level is 350±50mVp-p.

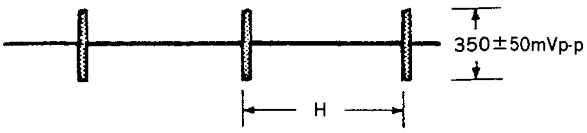


Fig. 7-3.

7-2-3. INT SYNC Level Confirmation (YS-6 Board)

Signal	No signal
Measurement point	Q206 emitter (TP013)
Measurement equipment	Oscilloscope
Specified value	300±50mVp-p

[Connection]

1) Remove the pattern generator.

[Confirmation]

1) Confirm that the INT SYNC level is 300±50mVp-p.

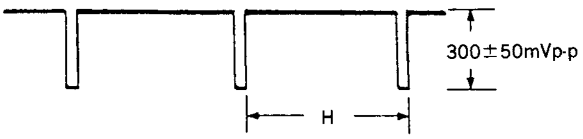


Fig. 7-4.

7-2-4. H AFC Adjustment (CA-16 Board)

Signal	No signal
Measurement point	IC104 pin ⑮
Measurement equipment	Frequency counter
Adjustment element	RV101
Specified value	15625±10Hz

[Connection]

1) Remove CN133. (Reconnect it after adjustment.)

[Adjustment Method]

1) Adjust to 15625±10Hz with RV101.

7-2-5. H Front Blanking Adjustment (CA-16 Board)

Signal	Color bar
Measurement point	S VIDEO OUT 1 terminal pin ③ (JK-44 board W123 pin ①)
Measurement equipment	Oscilloscope
Adjustment element	RV103
Specified Value	1.8 ±0.2 μsec

[Setting of Switches]

- VIDEO FADER switch ....ON
- WHITE FADER switch............................ON
- FADER lever......................MAX (fully upward)

[Adjustment Method]

1) Adjust an H front blanking position to 1.8 ±0.2 μsec with RV103.

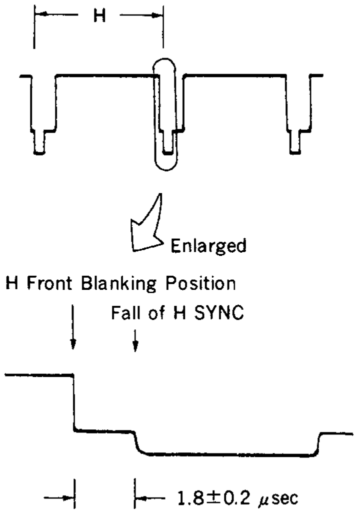


Fig. 7-5.

7-2-6. H Back Blanking Adjustment (CA-16 Board)

Signal	Color bar
Measurement point	S VIDEO OUT 1 terminal pin ③ (JK-44 board W123 pin ①)
Measurement instrument	Oscilloscope
Adjustment element	RV102
Specified value	5.8±0.2μsec

[Setting of Switches]

- VIDEO FADER switch ....ON
- WHITE FADER switch............................ON
- FADER lever......................MAX (fully upward)

[Adjustment Method]

1) Adjust an H back blanking position to 5.8±0.2μsec with RV102.

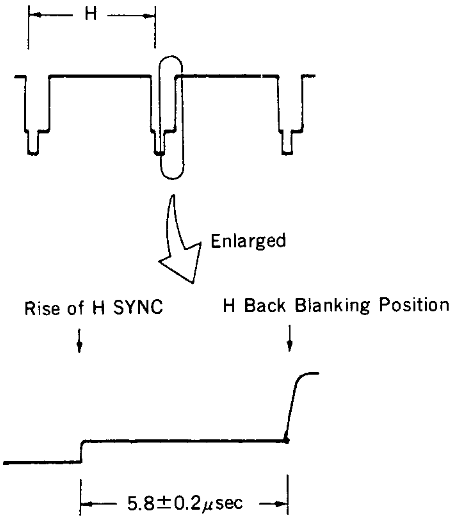

H
Enlarged
Rise of H SYNC
H Back Blanking Position
5.8±0.2μsec

Fig. 7-6.

7-2-7. V Blanking Adjustment (CA-16 Board)

Signal	Color bar
Measurement point	CH1 : IC106 pin ③ CH2 : S VIDEO OUT 1 terminal pin ③ (JK-44 board W123 pin ①)
Measurement equipment	Oscilloscope
Adjustment element	RV104
Specified value	0±30μsec

[Setting of Switches]

- BYPASS switch ....ON

[Adjustment Method]

1) With RV104, correspond a fall of a V blanking signal (CH1) to a rise of a video portion (CH2).

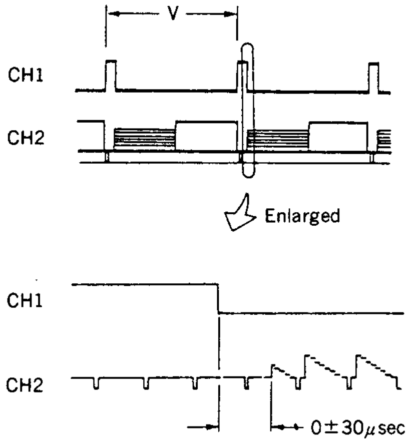

V
CH1
CH2
Enlarged
CH1
CH2
0±30μsec

Fig. 7-7.

7-3. ADJUSTMENT OF COMPOSITE VIDEO SIGNAL SYSTEM

7-3-1. Y-SEP Level Adjustment (WF-1 Board)

Signal	Color bar
Measurement point	Q253 emitter (TP017)
Measurement equipment	Oscilloscope
Adjustment element	LV202 (CHROMA) RV204 (Y+SYNC)
Specified value	0±40mVp-p (CHROMA) 1.00±0.05Vp-p (Y+SYNC)

[Adjustment Method]

1) Adjust the chroma signal level to min. (0±40mVp-p) with LV201.
2) Adjust the Y signal level to 1.00 ± 0.05Vp-p with RV204.

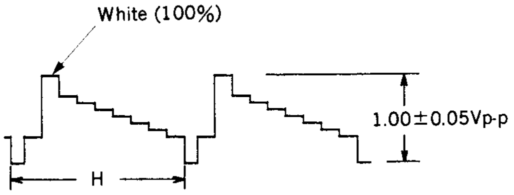


Fig. 7-8.

7-3-2. C-SEP Frequency Characteristic Adjustment (WF-1 Board)

Signal	Color bar
Measurement point	Q254 emitter (TP018)
Measurement instrument	Oscilloscope
Adjustment element	LV203
Specified value	Maximize chroma signal

[Adjustment Method]

1) Adjust with LV203 so that chroma signal becomes maximized.

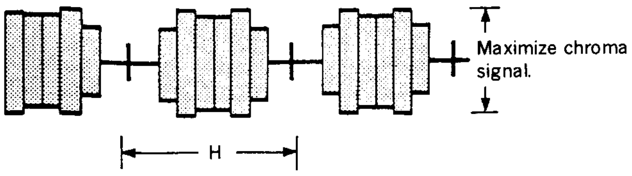


Fig. 7-9.

7-3-3. C-SEP Level Adjustment (WF-1 Board)

Signal	Color bar
Measurement point	Q254 emitter (TP018)
Measurement instrument	Oscilloscope
Adjustment element	RV205
Specified value	664±20mVp-p

[Adjustment Method]

1) Adjust the chroma signal level to 664±20mVp-p.

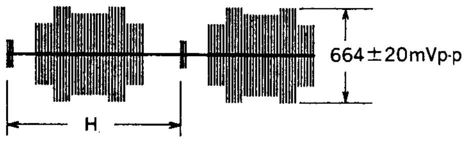


Fig. 7-10.

7-3-4 (1). Y-C SEP Frequency Characteristic Adjustment (WF-1 board) (Using color bar signal)

Signal	Color bar
Measurement point	VIDEO OUT terminal
Measurement instrument	Oscilloscope
Adjustment element	RV203
Specified value	Minimize the spike at border of YELLOW and CYAN.

[Adjustment Method]

1) Turn RV203 fully counterclockwise (↺)
2) Shorten the spike at border of YELLOW and CYAN by turning RV203 clockwise (↻), and stop it directly before it disappears.

Note : Do not turn RV203 too much, or the angles of CYAN round off.

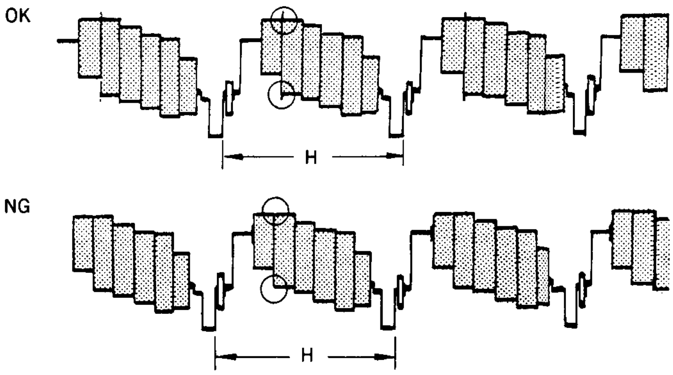


Fig. 7-11 (a).

7-3-4 (2). Y-C SEP Frequency Characteristic Adjustment (WF-1 board) (Using color bar signal)

Signal	Sweep
Measurement point	VIDEO OUT 1 terminal
Measurement instrument	Oscilloscope
Adjustment element	RV203
Specified value	Make flat around 2—6MHz

[Adjustment Method]

1) Adjust RV203 so that the waveform of 2—6MHz becomes flat.

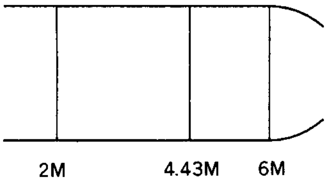


Fig. 7-11 (b).

7-3-5. Composite Y Level and Chroma Level Adjustment (WF-1 Board)

Signal	Color bar
Measurement point	VIDEO OUT 1 terminal
Measurement equipment	Oscilloscope
Adjustment element	RV800 (Y level) RV802 (chroma level)
Specified value	700±30mVp-p (Y level) 664±30mVp-p (chroma level)

Note : 1) The VIDEO OUT 1 terminal must be terminated at 75Ω.
2) Be sure that the "7-5-2. Chroma Level adjustment" have been already completed.

[Adjustment Method]

1) Adjust the Y signal level to 700±30mVp-p with RV800.
2) Adjust the chroma signal level to 664±30mVp-p with RV802.

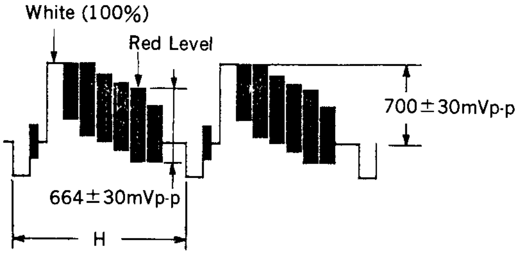


Fig. 7-12.

7-4. ADJUSTMENT OF Y MAIN SIGNAL SYSTEM, NEGATIVE/POSITIVE INVERTER AND Y-γ CIRCUIT.

7-4-1. Pilot Signal Level Adjustment (YS-6 Board)

Signal	Color bar
Measurement point	Q376 emitter
Measurement equipment	Oscilloscope
Adjustment element	RV301
Specified value	0±40mV

[Adjustment Method]

1) Adjust the pilot signal level to the white 100% level with RV301. Level difference = 0±40mV

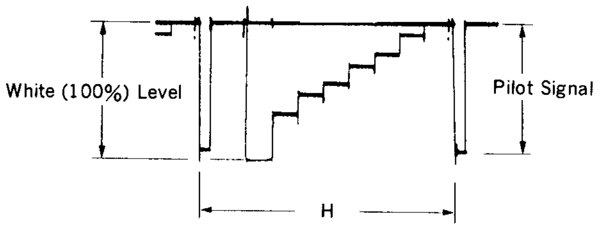


Fig. 7-13.

7-4-2. Negative AGC Adjustment (YS-6 Board)

Signal	Color bar
Measurement point	IC303 pin ⑮
Measurement equipment	Oscilloscope
Adjustment element	RV305
Specified value	0±30mV

[Setting of Switches]

- REVERSE (NEGA/POSI) switch .... ON

[Adjustment Method]

1) Turn RV305 slowly to correspond the white 100% level to the blanking level.
Level difference = 0±30mV

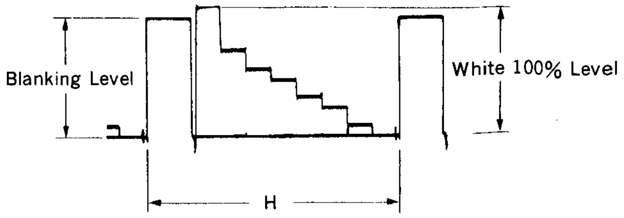


Fig. 7-14.

7-4-3. Y-γ Center Adjustment (YS-6 Board)

Signal	Color bar
Measurement point	Q321 collector
Measurement equipment	Oscilloscope (DC range)
Adjustment element	RV302
Specified value	−1.00±0.05Vdc

[Adjustment Method]

1) Confirm the 0Vdc level of the oscilloscope.
2) Adjust the Y signal lower DC level to −1.00±0.05Vdc with RV302.

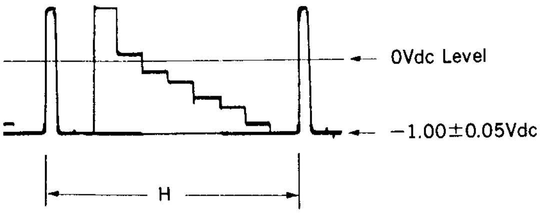


Fig. 7-15.

7-4-4. Positive AGC Adjustment (YS-6 Board)

Signal	Color bar
Measurement point	Q343 emitter
Measurement equipment	Oscilloscope
Adjustment element	RV306
Specified value	1.4±0.1Vp-p

[Adjustment Method]

1) Turn RV306 slowly to adjust the Y signal level to 1.4±0.1Vp-p.

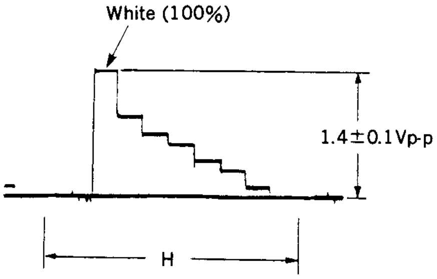


Fig. 7-16.

7-4-5. Y-γ LOW and Y-γ HIGH Adjustment (YS-6 Board)

Note : "Y-γ LOW adjustment" and "Y-γ HIGH adjustment" affect each other.
Make these adjustments until both specified values are met.

Signal	Color bar
Measurement point	CH1 : S VIDEO OUT 1 terminal pin ③ (JK-44 board W123 pin ①) CH2 : W107 pin ③ (Y BYPASS)
Measurement equipment	Oscilloscope ADD mode CH2 polarity. . . .INVERT

Note : 1) This S VIDEO 1 terminal must be terminated at 75Ω.
2) make even the CH1 gain and CH2 gain of the oscilloscope.

1. Y-γ LOW Adjustment

Adjustment element	RV303
Specified value	The "cyan" and "green" levels coincide with each other.

[Adjustment Method]

1) Fully turn the GAMMA knob counterclockwise (↺).
2) With RV303, make the "cyan" and "green" levels identical, and at the same time, to maximum.
3) Return the GAMMA knob to a center click position.

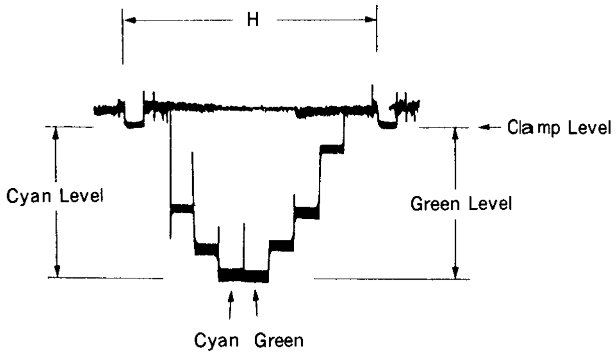


Fig. 7-17.

2. Y-γ HIGH Adjustment

Adjustment element	RV304
Specified value	The "cyan" and "magenta" levels must be equal to each other.

[Adjustment Method]

1) Fully turn the GAMMA knob clockwise (↻).
2) Viewing from the parts surface side, fully turn RV304 counterclockwise (↺).
3) Turn RV304 slowly clockwise to correspond the "cyan" level to the "magenta" level.
4) Return the GAMMA knob to a center click position.

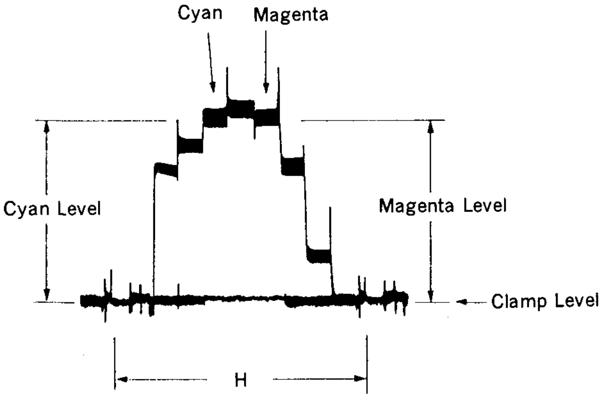


Fig. 7-18.

7-4-6. C-γ Adjustment (YS-6 Board)

Signal	Color bar
Measurement point	IC101 pin ⑮
Measurement equipment	Oscilloscope
Adjustment element	RV101
Specified value	0±40mV

[Adjustment Method]

1) Correspond the white 100% level to the blanking level with RV101.
   Level difference = 0±40mV

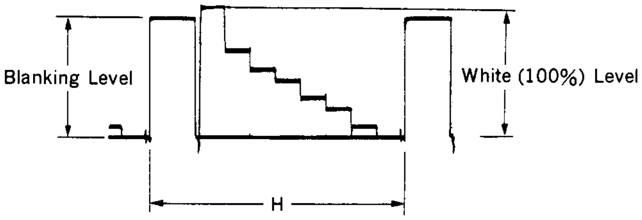


Fig. 7-19.

7-4-7. Y Level and SYNC Level Adjustment (YS-6 Board)

Signal	Color bar
Measurement point	S VIDEO OUT 1 terminal pin ③ (JK-44 board W123 pin ①)
Measurement equipment	Oscilloscope
Adjustment element	RV315 (Y level) RV400 (SYNC level)
Specified value	700±30mVp-p (Y level) 300±20mVp-p (SYNC level)

Note : The S VIDEO OUT 1 terminal must be terminated at 75Ω.

[Adjustment Method]

1) Adjust the Y level to 700±30mVp-p with RV315.
2) Adjust the SYNC level to 300±20mVp-p with RV400.

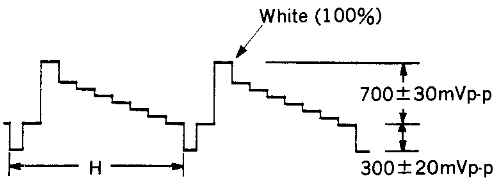


Fig. 7-20.

7-5. ADJUSTMENT OF CHROMA MAIN SIGNAL SYSTEM AND BURST SIGNAL SYSTEM

7-5-1. COLOR VR Center Adjustment (YS-6 Board)

Signal	Color bar
Measurment point	TP007 (CN127 pin ②)
Measurement equipment	Digital voltmeter
Adjustment element	RV308
Specified value	0±20mVdc

[Adjustment Method]

1) Confirm that the COLOR knob is at a center click position.
2) Adjust to 0±20 mVdc with RV308.

7-5-2. Chroma Level Adjustment (YS-6 Board)

Signal	Color bar
Measurement point	S VIDEO OUT1 terminal pin ④ (JK-44 board W123 pin ⑤)
Measurement equipment	Oscilloscope
Adjustment element	RV317
Specified value	664±30mVp-p

Note : The S VIDEO 1 terminal must be terminated at 75Ω.

[Adjustment Method]

1) Confirm that the WHITE BALANCE and BLACK BALANCE switches are turned off.
2) Adjust the chroma signal level to 664±30mVp-p with RV317.

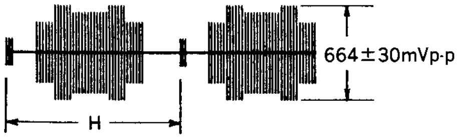


Fig. 7-21.

7-5-3. Burst Phase Adjustment (YS-6 Board) (Using the vectorscope)

Signal	Color bar
Measurement point	VIDEO OUT terminal
Measurement equipment	Vectorscope
Adjustment element	RV314
Specified value	0±2°

[Setting of Switches]

- SPLIT SCREEN switch ....ON

[Adjustment Method]

1) Turn on the BYPASS switch.
2) Measure the chroma phase of each color bright point (particularly red and yellow).
3) Turn off the BYPASS switch.
4) Adjust RV314 so that the chroma phase of each color bright point (particularly red and yellow) will be 0±2° against the chroma phase measured in the step 2).
5) Make "burst level adjustment".

7-5-4. Burst Level Adjustment (YS-6 Board)

Signal	Color bar
Measurement point	S VIDEO OUT 1 terminal pin ④ (JK-44 board W123 pin ⑤)
Measurement equipment	Oscilloscope
Adjustment point	RV318
Specified value	300±15mVp-p

Note : The S VIDEO OUT 1 terminal must be terminated at 75Ω.

[Adjustment Method]

1) Adjust to 300±15mVp-p with RV318.
2) Confirm the "burst phase adjustment".

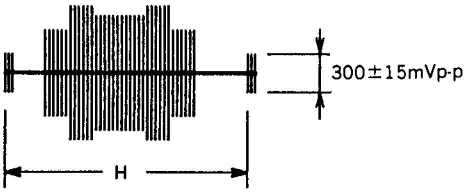


Fig. 7-22.

7-5-5. CNR Adjustment (WF-1 Board)

Signal	Color bar
Measurement point	VIDEO OUT terminal (75Ω terminated)
Measurement equipment	Vector scope
Adjustment element	LEVEL : RV201, PHASE : LV201
Specified value	LEVEL : 0±2% PHASE : 0±2°

[Adjustment Method]

1) Turn on the CHROMA NR switch.
2) Adjust the level as shown in Fig. 7-23 with RV201.
3) Adjust the phase as shown in Fig. 7-23 with LV201.
4) Repeat 2) and 3).
5) Turn on/off the CHROMA NR switch, and confirm that the phase and the level of each luminescent spot does not change.
6) Turn off the CHROMA NR switch.

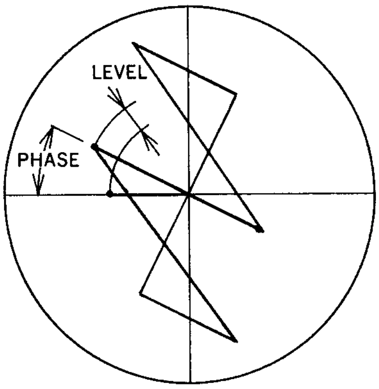


Fig. 7-23.

7-6. ADJUSTMENT OF FADER/WIPE BACK COLOR SYSTEM

7-6-1. Back Color bar Adjustment (CA-16 Board)

Signal	Optional
Measurement point	S VIDEO OUT 1 terminal pin ③ (JK-44 board W123 pin ①)
Measurement equipment	Oscilloscope
Adjustment element	RV201
Specified value	7.2±0.2μsec

[Setting of Switches]

- • WIPE PATTERN switch .... ▬ ON
- • WIPE lever ....MAX (fully upward)

[Adjustment Method]

1) Adjust to 7.2±0.2μsec with RV201.

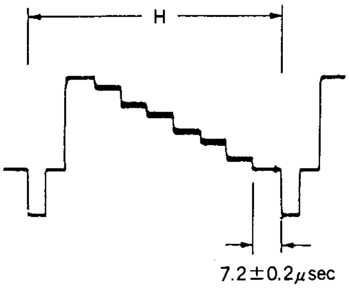


Fig. 7-24.

7-6-2. Fader/Wipe Back Color Y Level and Back Color Y Level Adjustment.

Signal	Color bar
Measurement point	S VIDEO OUT 1 terminal pin ③ (JK-44 board W123 pin ①)
Measurement equipment	Oscilloscope

Note : The S VIDEO OUT 1 terminal must be terminated at 75Ω.

[Setting of Switches]

- • FADER VIDEO switch ....ON
- • FADER BACK COLOR switch ....ON
- • FADER lever......................MAX (fully upward)
- • WIPE PATTERN switch .... ▬ ON
- • WIPE lever ....Center
- • BACK COLOR SELECT switch ....COLOR BAR
- • VIDEO ART knob ....MAX (fully clockwise)

1. Fader/Wipe Back Color Y Level Adjustment (WF-1 Board)

Adjustment element	RV603
Specified value	0±10mV

[Adjustment Method]

1) With RV603, make the fader back color Y signal level correspond to the wipe back color Y signal level.

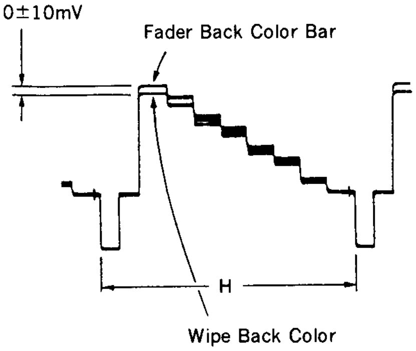


Fig. 7-25.

2. Back Color Y Level Adjustment (CA-16 Board)

Adjustment element	RV707
Specified value	550±20mV

[Adjustment Method]

1) Adjust the back color Y signal level to 550±20mV with RV707.

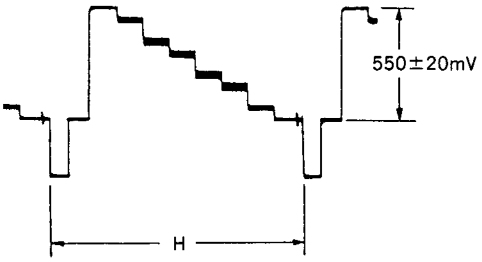


Fig. 7-26.

7-6-3. Fader White Level Adjustment (WF-1 Board)

Signal	Color bar
Measurement point	S VIDEO OUT 1 terminal pin ③ (JK-44 board W123 pin ①)
Measurement equipment	Oscilloscope
Adjustment element	RV601
Specified value	630±30mVp-p

Note : The S VIDEO OUT 1 terminal must be terminated at 75Ω.

[Setting of Switches]

- FADER VIDEO switch ....ON
- FADER WHITE switch............................ON
- FADER lever ....MAX(fully upward)

[Adjustment Method]

1) Adjust the Y signal level to 630±30mVp-p with RV601.

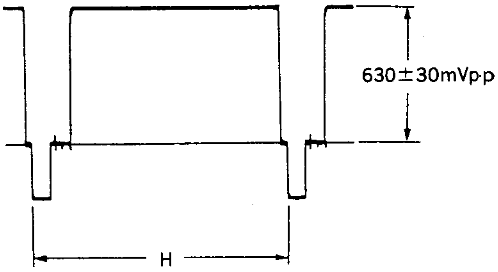


Fig. 7-27.

7-6-4. fsc Adjustment (CA-16 Board)

Signal	Color bar
Measurement point	Q702 emitter
Measurement equipment	Frequency counter
Adjustment element	CV701
Specified value	4433618 ± 25Hz

[Connection]

1) Remove CN130.
2) With a 10μF capacitor, connect between the IC703 pin ⑤ and GND.
   (Restore those parts mentioned above in 1) and 2).)

[Adjustment Method]

1) Adjust to 4433618±25Hz with CV701.
2) After completing this adjustment, be sure to make ACC peak Adjustment as described in 7-6-5.

7-6-5. ACC Peak Adjustment (CA-16 Board)

Signal	Color bar
Measurement point	Q707 emitter
Measurement equipment	Oscilloscope
Adjustment element	RV702
Specified value	Portion Ⓐ : 0±40mVp-p Portion Ⓑ : over 400mVp-p

[Adjustment Method]

1) Adjust RV702 so that portion Ⓐ is 0±40mVp-p and portion Ⓑ is over 400mVp-p.
2) Make fsc Adjustment described in 7-6-4. below.

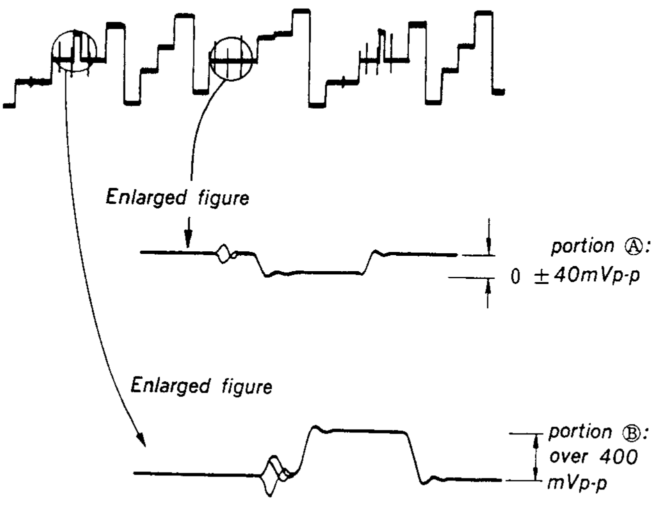


Fig. 7-28.

7-6-6. ACC Adjustment (CA-16 Board)

Signal	Color bar
Measurement point	CH1 : YS-6 board W107 pin ⑤ (C BYPASS) CH2 : S VIDEO OUT 1 terminal pin ④ (JK-44 board W123 pin ⑤)
Measurement equipment	Oscilloscope
Adjustment element	RV704 (back color chroma level) RV705 (ACC)
Specified value	664±40mVp-p (at the burst level of 300 mVp-p) 200±50 mVp-p (at the burst level of 100 mVp-p)

Note : The S VIDEO 1 terminal must be connected at 75Ω.

[Setting of Switches]

- FADER lever......................MAX (fully upward)
- FADER VIDEO switch ....ON
- FADER BACK COLOR switch ....ON
- COLOR SELECT switch..................COLOR BAR

[Preparation]

1) Prepare a semi-fixed resistor (2.2 kΩ to 4.7kΩ).
2) Confirm that the burst level of oscilloscope CH1 is 300±15mVp-p.
   (When this value is not met, adjust the output level of the pattern generator.)
3) Connect the semi-fixed resistor prepared in 1) between the YS-6 board Q214 base and GND. (Use a clip, etc. for connection so that it can be removed readily.)
4) With the semi-fixed resistor, adjust the burst level of oscilloscope CH1 to 100±5mVp-p.
5) Remove the semi-fixed resistor.

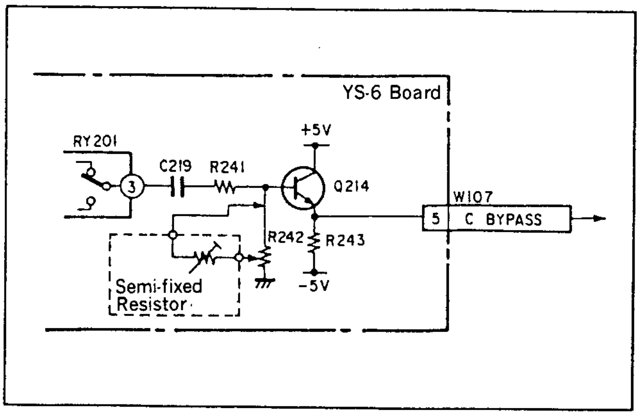
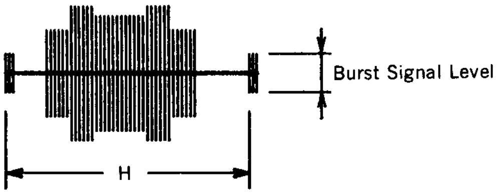


Fig. 7-29.

[Adjustment Method]

1) Confirm that the CH1 burst signal level is 300±15mVp-p.
2) Turn RV704 slowly to adjust the CH2 chroma signal level to 664±40mVp-p.
3) Connect the semi-fixed resistor prepared in the step 1) of [Preparation] between the Q214 base and GND.
4) Confirm that the CH1 burst signal level is 100±5mVp-p.
5) With RV705, adjust the CH2 chroma signal level to 200±50mVp-p.
6) Remove the semi-fixed resistor connected in the step 4).
7) Repeat the steps 2) through 7) until the specified value is met.

CH1 Burst Signal Level



CH2 Chroma Signal Level

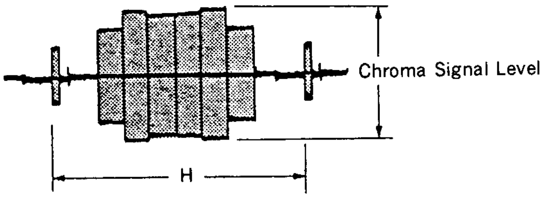


Fig. 7-30.

7-6-7. Fader/Wipe Back Color Chroma Level/Phase Adjustment (Using the Vectorscope)

Signal	Color bar
Measurement point	VIDEO OUT terminal
Measurement equipment	Vectorscope

[Setting of Switches]

- FADER VIDEO switch ....ON
- FADER BACK COLOR switch ....ON
- FADER lever......................MAX (fully upward)
- WIPE PATTERN switch.......................... ▄
- WIPE lever ....Center
- BACK COLOR SELECT switch ....COLOR BAR
- VIDEO ART knob ....MAX (fully clockwise)

1. Fader/Wipe Back Color Chroma Level Adjustment (WF-1 Board)

Adjustment element	RV604 (level) RV602 (phase)
Specified value	0±1% (level) 0±1° (phase)

[Adjustment Method]

1) With RV602 and RV604, make the color bright point for fader back color chroma correspond to that for wipe back color chroma.

2. Back Color Chroma Level/Phase Adjustment (YS-6, CA-16 Board)

Adjustment element	YS-6 board RV334 (phase) CA-16 board RV706 (level)
Specified value	Each color bright point must be within the specified frame of the vectorscope. (⊞)

[Adjustment Method]

1) With RV706, place each color bright point within the specified frame of the vectorscope.
   ※ When each color bright point cannot be put within the specified phase frame, adjust the YS-6 board RV334. After RV334 is adjusted, make "color correct phase adjustment".

7-6-8. Fader/Wipe Back Color Chroma Level/Phase Adjustment (Using the Oscilloscope)

Signal	Color bar
Measurement point	S VIDEO OUT 1 terminal pin ④ (JK-44 board W123 pin ⑤)
Measurement equipment	Oscilloscope

[Setting of Switches]

- FADER VIDEO switch ....ON
- FADER BACK COLOR switch ....ON
- FADER lever......................MAX (fully upward)
- BACK COLOR SELECT switch ....COLOR BAR
- VIDEO ART knob ....MAX (fully clockwise)

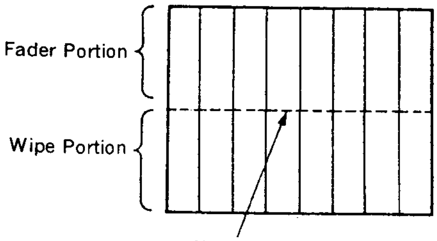
1. Fader/Wipe Back Color Chroma Level/Phase Adjustment (WF-1 Board)

Adjustment element	RV604 (level) RV602 (phase)

[Adjustment Method]

1) Shift the WIPE lever to the MAX position (fully upward).
2) Confirm that all the WIPE PATTERN switches are turned off, and read the chroma signal level.
3) Turn on the WIPE PATTERN switch (⬓). With RV604, adjust the chroma signal level to the value read in the step 2.)
4) Shift the WIPE lever to the center position. With RV602, make equal the hue of the upper color bar (fader color bar) and that of the lower color bar (wipe color bar) on the screen to each other.

- Monitor TV Screen (WIPE Lever at Center)



No boundary is viewed when adjusted accurately.

- Oscilloscope Waveform (WIPE Lever at MAX)

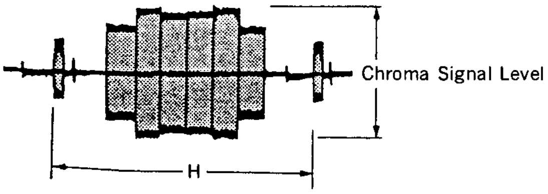


Fig. 7-31.

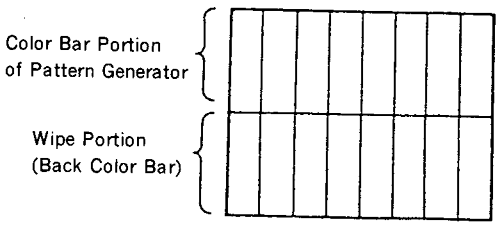
2. Back Color Chroma Level/Phase Adjustment (YS-6 and CA-16 Boards)

Adjustment element	YS-6 board RV334 (phase) CA-16 board RV706 (level)
Specified value	664±30mVp-p (level)

[Adjustment Method]

1) Turn off the FADER VIDEO switch.
2) Turn on the WIPE PATTERN swtich (⬓) and shift the WIPE lever to its MAX position (fully upward).
3) With RV706, adjust the chroma signal level to 664± 30mVp-p.
4) Shift the WIPE lever to the center position.
5) With RV706, make equal the hue of the upper color bar (pattern generator color bar) and that of the lower color bar (back color bar) on the screen to each other.

- Monitor TV Screen (WIPE Lever at Center)


Color Bar Portion of Pattern Generator
Wipe Portion (Back Color Bar)

- Oscilloscope Waveform (WIPE Lever at MAX)

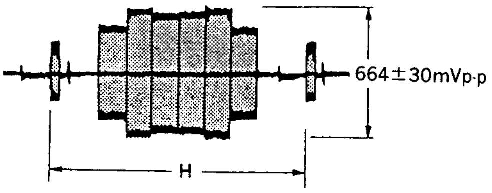


Fig. 7-32.

7-6-9. Back Color INT Mode Phase Adjustment (WF-1 Board)

Signal	Color bar
Measurement point	VIDEO OUT terminal (75Ω terminated)
Measurement instrument	Vectorscope
Adjustment element	RV991
Specified value	Chroma should be within the specified frame.

[Preparation]

1) Set WIPE PATTERN ◨ switch to ON.
2) Raise WIPE lever fully.

[Adjustment Method]

1) Adjust RV991 so that each chroma color comes to the center of the specified frame

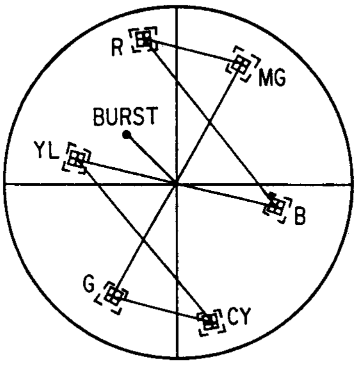


Fig. 7-33.

7-7. ADJUSTMENT OF COLOR CORRECT SYSTEM

7-7-1. Color Correct Carrier Balance Adjustment (YS-6 Board)

Signal	Optional
Measurement point	Q117 emitter
Measurement equipment	Oscilloscope
Adjustment element	RV104, RV105
Specified value	Chroma signal carrier amplitude minimized

[Connection]

1) Connect the Q109 collector and GND with a jumper wire.

[Setting of Switches]

- WHITE BALANCE switch ....ON
- WIDE RANGE (W. B) switch ....ON

[Adjustment Method]

1) Turn RV104 and RV105 alternately to minimize the chroma signal carrier amplitude.

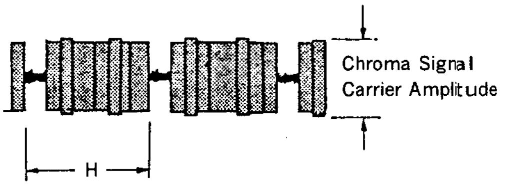


Fig. 7-34.

7-7-2. Chroma Limiter Adjustment (YS-6 Board)

Signal	Color bar
Measurement point	S VIDEO OUT 1 terminal pin ④ (JK-44 board W123 pin ⑤)
Measurement equipment	Oscilloscope
Adjustment element	RV316
specified value	900±50mVp-p

Note : The S VIDEO OUT 1 terminal must be terminated at 75Ω.

[Setting of Switches]

- COLOR knob....................MAX (fully clockwise)
- WHITE BALANCE switch ....ON
- WIDE RANGE (W. B) switch ....ON

[Adjustment Method]

1) Maximize the chroma signal level with the COLOR CORRECT lever.
(Shift the lever almost to its most downward position.)
2) Adjust the chroma signal level to 900±50mVp-p with RV316.

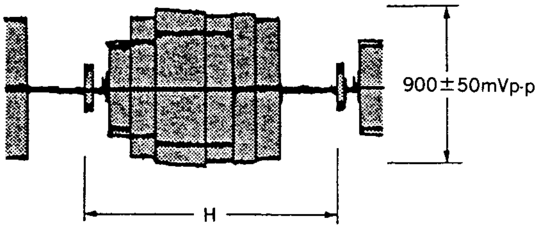


Fig. 7-35.

7-7-3. Color Correct Phase Adjustment (YS-6 Board) (Using the Vectorscope)

Signal	Color bar
Measurement point	VIDEO OUT terminal
Measurement equipment	Vectorscope
Adjustment element	RV102
Specified value	90±4°

[Setting of Switches]

- COLOR knob ....MIN (fully counterclockwise)
- WHITE BALANCE switch ....ON
- WIDE RANGE (W. B) switch ....ON
- WHITE BALANCE lever ....Fully upward (12 o'clock position)

[Adjustment Method]

1) Adjust with RV102 so that the two color bright points come together on R-Y axis.

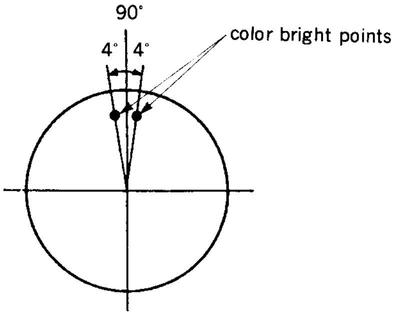


Fig. 7-36.

7-7-4. Color Correct Position Adjustment (YS-6 Board) (Using the Monitor TV)

Signal	Color bar
Measurement point	Monitor TV screen
Measurement equipment	
Adjustment element	RV102
Specified value	A color correct portion must have the same hue (magenta) as a wipe portion.

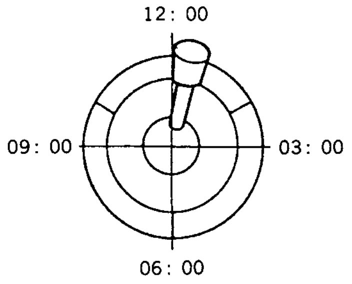
[Setting of Switches]

- COLOR knob ....MIN (fully counterclockwise)
- WHITE BALANCE switch ....ON
- WIDE RANGE (W.B) switch ....ON
- WIPE PATTERN switch........................... ⬓
- WIPE lever ....Center
- COLOR SELECT switch ....Magenta (purple)

[Adjustment Method]

1) As shown in the figure below, set the left edge of the WHITE BALANCE lever to a 12 o'clock position.
2) With RV102, adjust the color correct portion (top of the screen) to the same hue of the bottom of the screen (magenta).

- WHITE BALANCE Lever Position



- Monitor TV Screen

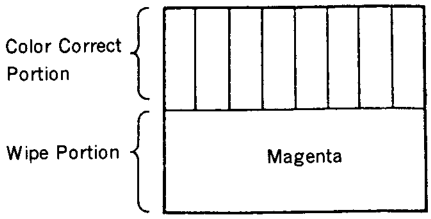


Fig. 7-37.

7-7-5. Color Correct Level Adjustment (YS-6 Board)

Signal	Color bar
Measurement point	S VIDEO OUT 1 terminal pin ④ (JK-44 board W123 pin ⑤)
Measurement equipment	Oscilloscope
Adjustment element	RV103
Specified value	300±10mVp-p

Note : The S VIDEO OUT 1 terminal must be terminated at 75Ω.

[Setting of Switches]

- COLOR knob ....MIN (fully counterclockwise)
- WHITE BALANCE switch ....ON
- WIDE RANGE (W. B) switch ....OFF

[Adjustment Method]

1) Maximize the chroma signal level with the WHITE BALANCE lever.
2) Adjust the chroma level signal to 300±10mVp-p with RV103.

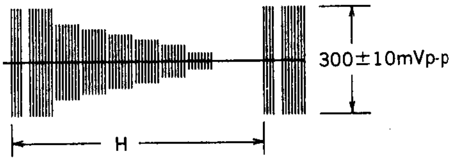


Fig. 7-38.

7-8. ADJUSTMENT OF WIPE SYSTEM

7-8-1. H RAMP Level Adjustment (CA-16 Board)

Signal	Optional
Measurement point	Q808 emitter
Measurement equipment	Oscilloscope (DC range)
Adjustment element	RV802 (lower DC level) RV801 (upper DC level)
Specified value	1.6±0.05Vdc (lower DC level) 3.8±0.05Vdc (upper DC level)

[Adjustment Method]

1) With RV802, adjust the lower DC level of the H RAMP waveform to 1.6±0.05Vdc.
2) With RV801, adjust the upper DC level of the H RAMP waveform to 3.8±0.05Vdc.

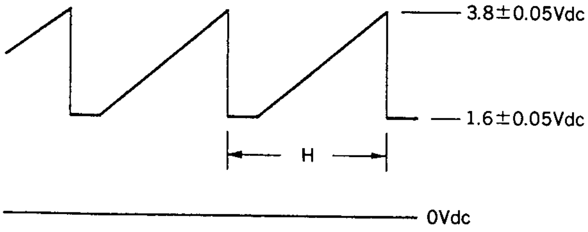


Fig. 7-39.

7-8-2. V RAMP Level Adjustment (CA-16 Board)

Signal	Optional
Measurement point	Q826 emitter
Measurement equipment	Oscilloscope (DC range)
Adjustment element	RV806
Specified value	3.8±0.05Vdc

[Adjustment Method]

1) Confirm that the lower DC level of the V RAMP waveform is 1.6±0.1Vdc.
   When the specified value is not met, make "H RAMP level adjustment".
2) With RV806, adjust the upper DC level of the V RAMP waveform to 3.8±0.05Vdc.

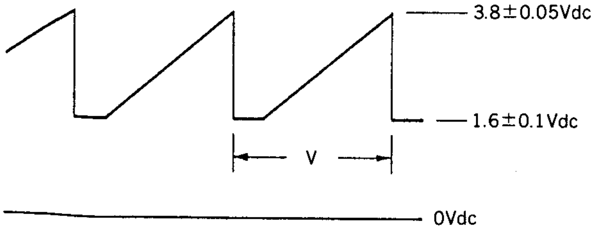


Fig. 7-40.

7-8-3. $\overline{\text{H}}$ RAMP, $\overline{\text{V}}$ RAMP DC Clamp Level Adjustment (CA-16 Board)

Signal	Optional
Measurement point	Q812 emitter
Measurement equipment	Oscilloscope (DC range)
Adjustment element	RV803
Specified value	1.6±0.05Vdc

[Adjustment Method]

1) With RV803, adjust the lower DC level of the H RAMP waveform to 1.6±0.05Vdc.

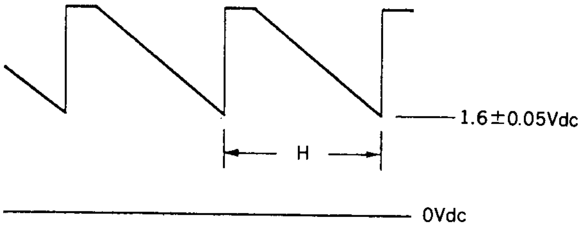


Fig. 7-41.

7-8-4. Diamond Pattern Center Adjustment (CA-16 Board)

Signal	Color bar
Measurement point	Confirm on the monitor TV screen
Measurement equipment	
Adjustment element	RV804, RV805
Specified value	0±5mm (on 20-inch monitor TV)

[Setting of Switches]

- WIPE PATTERN switch .... ▣ ON

[Adjustment Method]

1) With the WIPE lever, bring the corners of the wipe pattern into contact with the monitor screen frame.
2) With RV804, make the right corner of the wipe pattern correspond to the vertical center of the screen.
3) With RV805, make the left corner of the wipe pattern correspond to the vertical center of the screen.
4) Make the wipe pattern smaller with the WIPE lever*[1] and confirm that it is a diamond-shaped pattern with its right and left symmetrical.

*1. A horizontal width is about 2 cm on the 20-inch monitor TV screen.

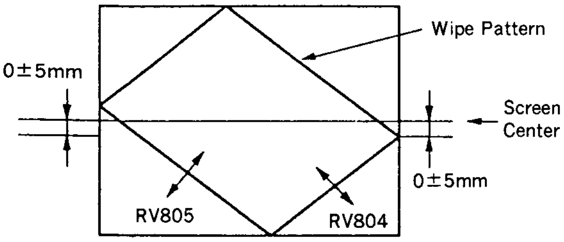


Fig. 7-42.

7-8-5. Round Wipe Pattern Roundness Adjustment (CA-16 Board)

Signal	Color bar
Measurement point	Confirm on the monitor TV screen
Measurement equipment	
Adjustment element	RV810
Specified value	0±5mm (on 20-inch monitor TV)

[Setting of Switches]

- WIPE PATTERN switch .... ▣ ON

[Adjustment Method]

1) With the WIPE lever, adjust the diameter of the round wipe pattern to about 15cm*[1].
2) Make the round wipe pattern a true circle with RV810.
3) Operating the WIPE lever, confirm that the round pattern is not deformed if its size is changed. (Within a circle size of 2 to 30 cm*[1].)

* 1. Size on the 20-inch monitor TV.

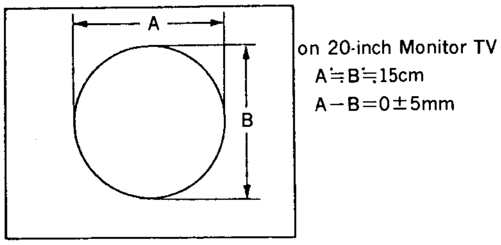


Fig. 7-43.

7-8-6. Round Wipe Pattern Position Adjustment (CA-16 Board)

Signal	Color bar
Measurement point	Confirm on the monitor TV screen
Measurement equipment	
Adjustment element	RV807(vertical position) RV808 (horizontal position)
Specified value	0±5mm (vertical position) 0±5mm (horizontal position) (on 20-inch monitor TV)

[Setting of Switches]

- WIPE PATTERN switch .... ▣ ON

[Adjustment Method]

1) With the WIPE lever, adjust the diameter of the round wipe pattern to about 3cm*[1].
2) With RV807 and RV808, center the round wipe pattern with the monitor TV screen.

*1. Size on the 20-inch monitor TV.

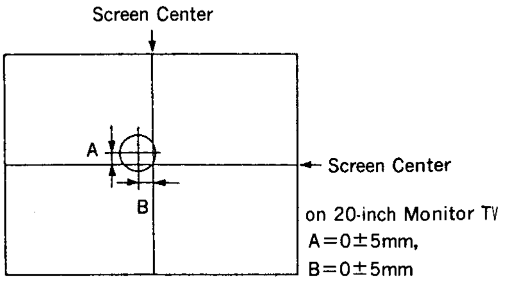


Fig. 7-44.

7-8-7. Round Wipe Pattern Size Adjustment (CA-16 Board)

Signal	Color bar
Measurement point	Confirm on the monitor TV screen
Measurement equipment	
Adjustment element	RV809
Specified value	0±1cm (on 20-inch monitor TV)

[Setting of Switches]

- WIPE PATTERN switch .... ◇ ON

[Adjustment Method]

1) With the WIPE lever, adjust the vertical size of the diamond pattern to about 10cm*1.
2) Select the WIPE PATTERN switch ○.
3) With RV809, make the vertical size of the round wipe pattern equal to that of the diamond pattern.

* 1. Size on the 20-inch monitor TV.

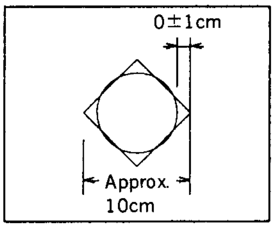

0±1cm
Approx. 10cm

Fig. 7-45.

7-9. ADJUSTMENT OF VIDEO ART AND SPLIT SCREEN SYSTEM

7-9-1. VIDEO ART REVERSE Level Adjustment (YS-6 Board)

Signal	Color bar
Measurement point	IC208 pin ④ (TP017)
Measurement equipment	Oscilloscope (DC range)
Adjustment element	RV201
Specified value	0±50mV

[Adjustment Method]

1) Confirm the lower DC level of the Y signal.
2) Turn on the VIDEO ART REVERSE switch.
3) With RV201, make the lower DC level of the Y signal correspond to the DC level confirmed in the step 1).
4) Turn off the VIDEO ART REVERSE switch.

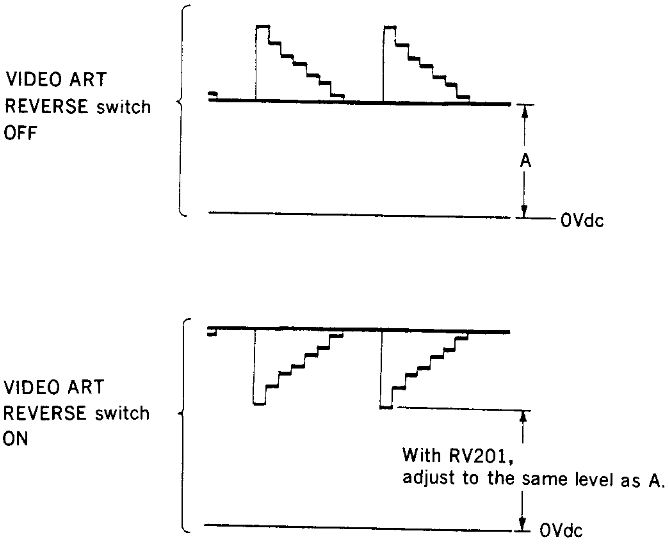

VIDEO ART
REVERSE switch
OFF
A
0Vdc
VIDEO ART
REVERSE switch
ON
With RV201,
adjust to the same level as A.
0Vdc

Fig. 7-46.

7-9-2. VIDEO ART VR Center Adjustment (YS-6 Board)

Signal	Color bar
Measurement point	CH1 : TP017 (IC208 pin ④) CH2 : TP018 (IC208 pin ⑤)
Measurement point	Oscilloscope (DC range)
Adjustment element	RV202
Specified value	550±50mVdc

[Adjustment Method]

1) Set the VIDEO ART knob to its center position.
2) Make even the 0Vdc level of the oscilloscope CH1 and CH2.
3) With RV202, adjust the level difference between CH1 and CH2 to 550±50mVdc.

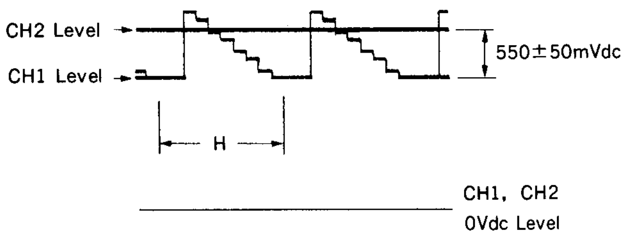


Fig. 7-47.

7-9-3. Split Screen Adjustment (WF-1 Board)

Signal	Color bar
Measurement point	S VIDEO OUT 1 terminal pin ③ (JK-44 board W123 pin ①)
Measurement equipment	Oscilloscope
Adjustment element	RV001
Specified value	36.5±0.5μsec

[Setting of Switches]

- SPILIT SCREEN switch ....ON
- REVERSE (NEGA/POSI) switch ....ON

[Adjustment Method]

1) With RV001, adjust a negative/positive switching position to 36.5±0.5μsec from a fall of H SYNC.

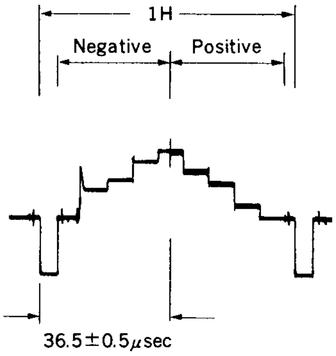


Fig. 7-48.

7-10. ADJUSTMENT OF AUDIO SYSTEM

Connect as shown below.

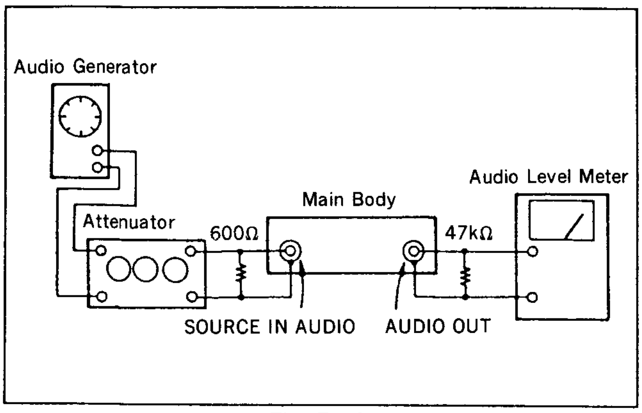

Audio Generator
Audio Level Meter
Main Body
Attenuator
600Ω
47kΩ
SOURCE IN AUDIO
AUDIO OUT

Fig. 7-49.

[Setting of Switches}

- AUDIO FADER switch ....OFF
- MIC level knob ....MIN
- AUDIO MIX knob ....SOURCE

7-10-1. Audio Output Level Adjustment (CA-16 Board)

R channel adjustment points are shown in [ ] .

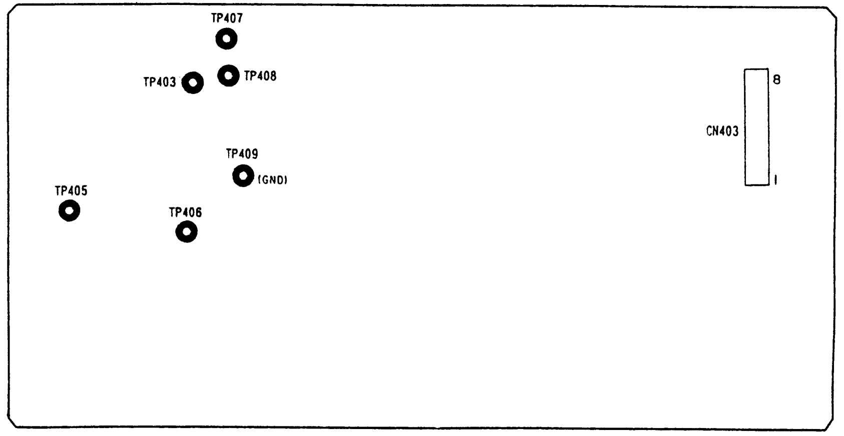
Signal	1kHz, −7.5dBs SOURCE IN terminal L [R]
Measurement point	AUDIO OUTPUT terminal L [R]
Measurement equipment	Audio level meter
Adjustment element	RV601 [RV602]
Specified value	−7.5±0.5dBs

[Adjustment Method]

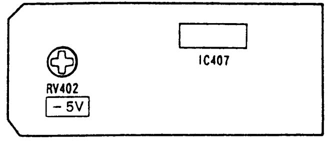
1) With RV601, adjust the output level to −7.5±0.5dBs.
2) Confirm that the audio output level difference between the L and R channels is 0±1 dB.

7-11. PARTS LOCATION DIAGRAM RELEVANT TO THE ADJUSTMENT

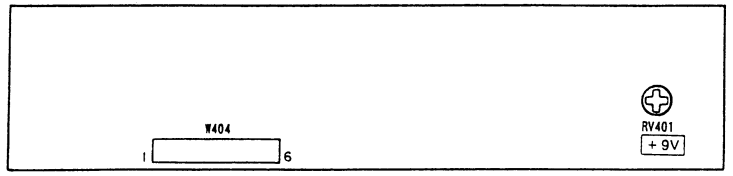
PW-61 BOARD (COMPONENT SIDE)


TP407
TP403
TP408
TP409
(GND)
TP405
TP406
CN403
8
1

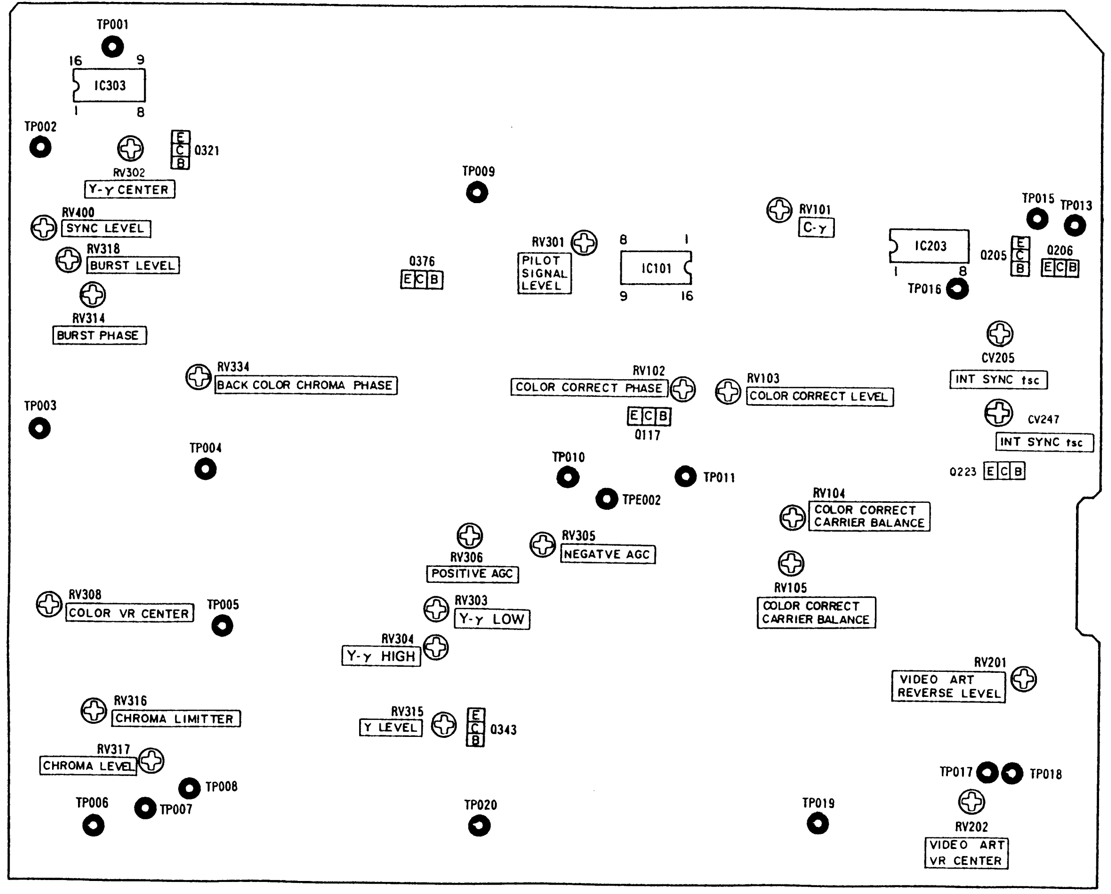
PT-70 BOARD (COMPONENT SIDE)


IC407
RV402
-5V

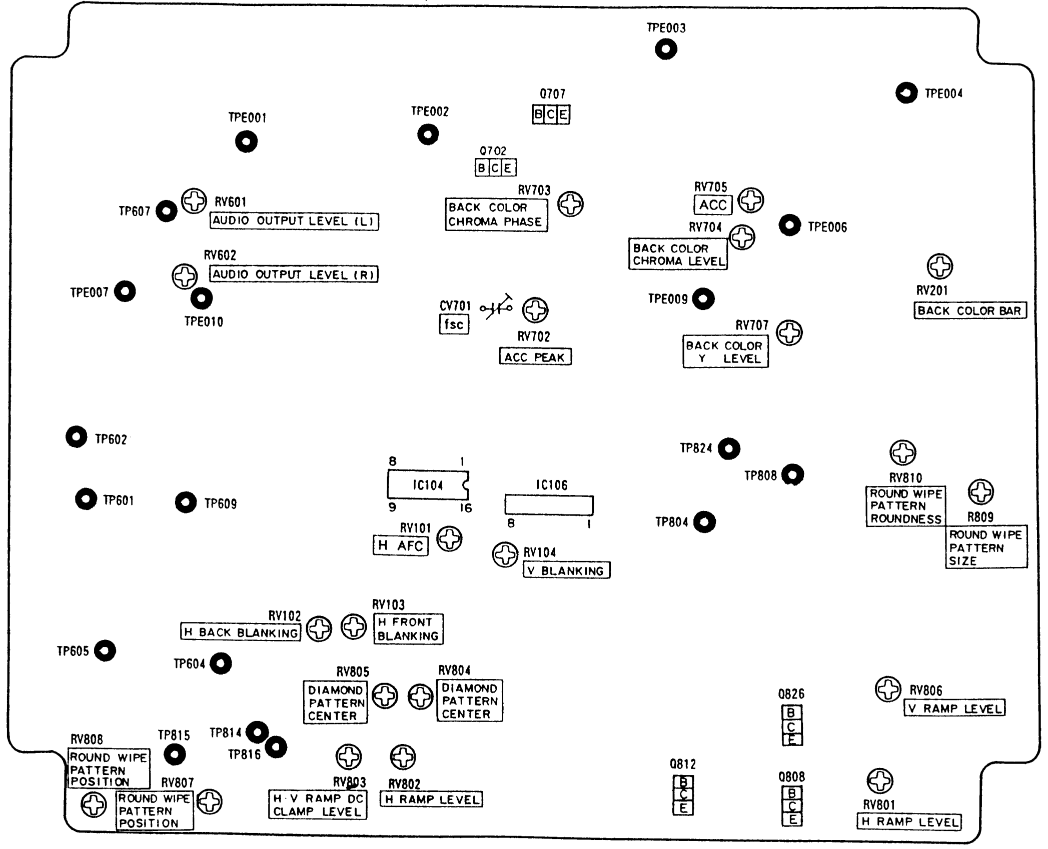
PT-68 BOARD (COMPONENT SIDE)


W404
1
6
RV401
+9V

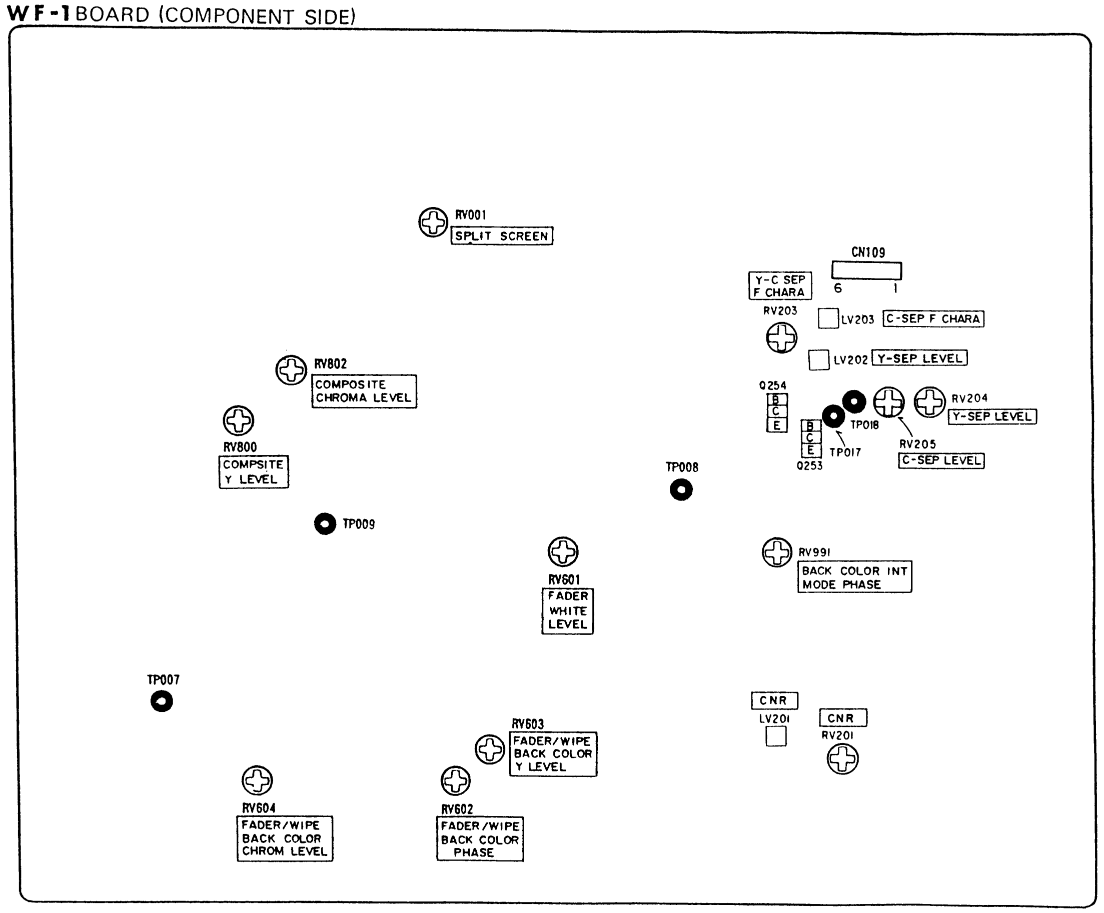
YS-6 BOARD (COMPONENT SIDE)


TP001
16
9
IC303
1
8
TP002
RV302
Y-Y CENTER
Q321
RV400
SYNC LEVEL
RV318
BURST LEVEL
RV314
BURST PHASE
TP009
Q376
RV301
PILOT SIGNAL LEVEL
IC101
RV101
C-Y
IC203
TP015
TP013
Q205
Q206
TP016
CV205
INT SYNC fsc
CV247
INT SYNC fsc
TP003
RV334
BACK COLOR CHROMA PHASE
RV102
COLOR CORRECT PHASE
Q117
RV103
COLOR CORRECT LEVEL
TP004
TP010
TPE002
TP011
Q223
RV104
COLOR CORRECT CARRIER BALANCE
RV306
POSITIVE AGC
RV305
NEGATVE AGC
RV105
COLOR CORRECT CARRIER BALANCE
RV308
COLOR VR CENTER
TP005
RV303
Y-Y LOW
RV304
Y-Y HIGH
RV201
VIDEO ART REVERSE LEVEL
RV316
CHROMA LIMITTER
RV315
Y LEVEL
Q343
RV317
CHROMA LEVEL
TP008
TP006
TP007
TP020
TP019
TP017
TP018
RV202
VIDEO ART VR CENTER

CA-16 BOARD (COMPONENT SIDE)


TPE003
TPE004
TPE001
TPE002
Q707
Q702
TP607
RV601
AUDIO OUTPUT LEVEL (L)
RV602
AUDIO OUTPUT LEVEL (R)
RV703
BACK COLOR CHROMA PHASE
RV705
ACC
RV704
BACK COLOR CHROMA LEVEL
TPE006
TPE007
TPE010
CV701
fsc
RV702
ACC PEAK
TPE009
RV707
BACK COLOR Y LEVEL
RV201
BACK COLOR BAR
TP602
TP601
TP609
IC104
IC106
RV101
H AFC
RV104
V BLANKING
TP824
TP808
TP804
RV810
ROUND WIPE PATTERN ROUNDNESS
R809
ROUND WIPE PATTERN SIZE
RV102
H BACK BLANKING
RV103
H FRONT BLANKING
TP605
TP604
RV805
DIAMOND PATTERN CENTER
RV804
DIAMOND PATTERN CENTER
Q826
RV806
V RAMP LEVEL
RV808
ROUND WIPE PATTERN POSITION
TP815
TP814
TP816
RV807
ROUND WIPE PATTERN POSITION
RV803
H V RAMP DC CLAMP LEVEL
RV802
H RAMP LEVEL
Q812
Q808
RV801
H RAMP LEVEL

WF-1 BOARD (COMPONENT SIDE)


RV001
SPLIT SCREEN
CN109
Y-C SEP F CHARA
RV203
LV203
C-SEP F CHARA
LV202
Y-SEP LEVEL
RV802
COMPOSITE CHROMA LEVEL
Q254
TP018
RV204
Y-SEP LEVEL
RV800
COMPSITE Y LEVEL
Q253
TP017
RV205
C-SEP LEVEL
TP008
TP009
RV601
FADER WHITE LEVEL
RV991
BACK COLOR INT MODE PHASE
TP007
CNR
LV201
CNR
RV201
RV603
FADER/WIPE BACK COLOR Y LEVEL
RV604
FADER/WIPE BACK COLOR CHROM LEVEL
RV602
FADER/WIPE BACK COLOR PHASE

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